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ABSTRACT

Information is presented on a study to determine which of several institutional characteristics are associated most closely with an institution's gift income and to determine which fund raising practices and programs are utilized in selected institutions. The study focused on public institutions with Carnegie classifications of Research I and II (RI and RII) and Doctoral Granting I and II (DGI and DGII). Results showed that factors associated with federal and state support plus an institution's endowment market value were most significantly related to an institution's gift income index. Three variables were significantly related to the gift income index for all the institutions (number of alumni, federal research and development, and educational and general expenditures). Fourteen appendices are: listing of all RI and RII institutions; listing of all DGI and DGII institutions; institutions identified in this study per classification; summary of data collection resources; institutional fund raising questionnaire; cover letter; variables and units of measure; strength of relationship guideline; generalized regression equation; a regression equation computation for Auburn University; computer printout of regression equation results for Auburn University; correlation coefficients for all gift income sources; correlation coefficients for all institutional variables; and results for all multiple regression equations. (SM)

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FACTORS ASSOCIATED WITH GIFT INCOME
IN PUBLIC RESEARCH AND DOCTORAL
GRANTING INSTITUTIONS

By

Janet L. Woods

A dissertation submitted in partial fulfillment of
the requirements for the degree of

DOCTOR OF PHILOSOPHY
(Education)

WASHINGTON STATE UNIVERSITY
Department of Educational Administration and Supervision

MAY 1987

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To the Faculty of Washington State University:

The members of the Committee appointed to examine the dissertation of JANET L. WOODS find it satisfactory and recommend that it be accepted.

Raymond J. Young
Chair
Donald B. Reed

Walter H Gmelch

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FACTORS ASSOCIATED WITH GIFT INCOME IN PUBLIC RESEARCH AND DOCTORAL GRANTING INSTITUTIONS

Abstract

by Janet L. Woods, Ph.D.
Washington State University
May 1987

Chairperson: Raymond J. Young

The problem investigated in this study was to determine which of several institutional characteristics were associated most closely with an institution's gift income and to determine which fund raising practices and programs were utilized in selected institutions.

In conducting this research twelve institutional characteristic variables possibly related to gift income were identified. Four variables were identified with the financial resources of an institution and eight variables were identified as inherent characteristics to an institution.

This study focused only on those public institutions classified as Research I and II and Doctoral Granting I and II, and who had reported their fund raising results in the 1982-83, 1983-84, and 1984-85 Council for Financial Aid reports, N = 77. The Spearman rank-difference method of correlation (rho) was used to determine which institutional variables were most closely associated with gift income and a step-wise multiple regression equation was used to identify those variables most likely to predict the total gift income level.

Institutions located in the top and bottom quartiles, by ranking on their total gift income index were identified. The institutions in each ranking received a fund raising programmatic questionnaire. Chi-square tests of independence were used to determine which differences in the fund raising programs between these two groups were statistically significant.

The results showed that all twelve of the institutional characteristic variables were significantly correlated to the total gift income index for all seventy-seven institutions. Results by institutional type, regional classification, and by top and bottom ranking revealed a variety of statistically significant variables per classification.

The most predictive regression equations for the total gift income index were found by geographical region. Regarding fund raising practices, the top and bottom institutions differed on several factors related to location, structure, staff size, and annual giving emphasis.

In conclusion, factors associated with federal and state support plus an institution's endowment market value were most significantly related to an institution's gift income index.

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DEDICATION

To my mother, Dorothy M. Woods, I dedicate this dissertation and my degree. It was through the example she lived as mother, wife, and friend; plus the faith, wisdom, power, courage, and dedication which she shared with her family, which has instilled in the generation after her a strong faith and an inner fortitude to face the challenges and opportunities placed before them.

With this degree, I memorialize the ideals and values she so ardently placed on an education.

Chapter 1

INTRODUCTION

A truly American phenomenon is the seemingly limitless generosity of energy, time, and money which private American citizens have given to public service charities and educational institutions. Historically American generosity has provided support to individuals, hospitals, disease control units, research centers, international relief funds, disaster support agencies, community service organizations, and educational institutions to name just a few beneficiaries.

An important component of American civilization has been its educational institutions. Built upon Andrew Jackson's vision for educating the populace and for providing a more relevant curriculum, American higher educational institutions have been built on the premise of diversity and responsiveness to society's needs. Reisman (1980) believed that diversity in American higher education is prized because it (1) increases the range of student choices, (2) makes higher education accessible to nearly everyone, (3) effects a match between student needs, goals, learning styles, speed, and abilities and educational programs, (4) meets the needs of a complex society, and (5) fosters institutions with different goals and missions.

Wescoe (1970) described the societal mission placed upon American universities as follows:

> The university was designed to be a change-making institution. It produces changes in people, in technology,in human relations, and in human affairs. The university functions to transmit knowledge, to enlarge upon it, to expand horizons and to open up a brighter future. To fulfill that purpose it is necessary to challenge the status quo. . . (p. 44).

Unfortunately as education responded to society's limitless demands and challenged the status quo through research work, costs for education rose but relative income availability did not. During the 1980's American higher education institutions became victims of inflationary trends, serious cutbacks in federal and state appropriations, declining student enrollments, plant maintenance losses, and the curtailment of numerous research projects. The very health of higher educational institutions remains in the hands of the federal government, resourceful administrators, and the philanthropic generosity of the American public.

Philanthropic support to colleges and universities in 1983-84 reached a record high of $5.6 billion dollars. Desruisseux (1985) noted that the amount was $440 million over the amount given the preceding year to colleges and universities. Alumni gifts were up to $1.305 billion, a 5.6% increase over the previous year. Gifts from other individuals were up 10.6% to $1.316 billion. This was the first time since 1977-78 that the amount of alumni gifts was less than the amount of gifts from other individuals. Corporate gifts totalled $1.27 billion, a 14.3% increase over the preceding year and a 128% increase since 1978-79. Total dollars from gift giving since 1978-79 increased 74%.

Desruisseux (1985) also noted that, of those institutions reporting their gift income to the Council for Financial Aid to Education's annual survey, both the public and private doctoral granting institutions each received more than $1 billion in contributions. The 56 private doctoral institutions reporting received $1.59 billion, and the 94 public doctoral institutions received $1.24 billion.

Corporate gifts to private institutions totaled $59.6 million to "match" a total of 223,112 gifts from individuals. Corporate support to public institutions totalled $19.1 million to match 90,910 gifts from individuals. Harvard led all institutions in the amount of voluntary support with $125,201,403.

The importance of private gifts to public higher education institutions is evident from Shriver's (1980) supporting comment:

> . . .the difference between a winner and a also-ran can be described in terms of a fraction of a second, the width of a finger tip, an extra, all-out effort, the

> last ounce of courage. So it is with public higher education, where the difference between excellent and good can often be measured by success or failure in attracting private gifts. The margin of excellence in public higher education is that provided by private giving beyond state appropriations and student fees (p. 4).

Cary (1980) identified numerous opportunities for which private money can assist public institutions. They are: (a) it provides scholarship and loan assistance to students, (b) it increases the number of endowed chairs for recruiting distinguished faculty, (c) it builds special facilities, i.e. museums, medical centers, and libraries, (d) it increases academic opportunities for students, and (e) it broadens many educational opportunities for minorities. Cary (1980) also felt that, "...private support makes the difference between the adequate and the truly great institutions." (p. 3) Since public research and doctoral granting institutions are expected to be responsible to societal needs and are leaders in research, teaching, and service, it is no wonder that these universities are turning toward their development officers for their leadership in acquiring private gift support.

As Desruisseux (1985) noted, Americans are giving more because they have been asked. Many charitable organizations and educational institutions have become more aggressive in their fund raising, because they have become dependent upon the flexibility provided by private gift support. They are working harder and taking their fund raising more seriously. Radock and Jacobson (1980) supported these ideas when they wrote, "Thus, as the financial situation tightens, public institutions have sought and obtained more private dollars, and private institutions have pursued and received more tax dollars." (p. 265)

In summary, institutional fund raising - both public and private - plays an integral role in a university's efforts to attain their margin of excellence. Since the decade of the 1980's is one of retrenchment, survival, and competition for private gift support, it is important for institutions to be accountable for the funds they receive and to more effectively present their needs to the American public. To help them do this, additional research must be undertaken to more closely analyze the institutional characteristics which might influence fund raising, to determine which institutional and program characteristics are associated with effectiveness in fund raising, and to examine what goals and areas of program emphasis institutions should stress to accomplish their goals.

Need For The Study

Faced with declines in federal and state appropriations, declining student enrollments, rising student costs, scrutiny of academic programs, and accountability guidelines for the expenditure of funds, both public and private higher education institutions find themselves aggressively pursuing the resources of private gift support in order to augment both their current program needs and their capital operating expenses. For institutions to be successful with acquiring private gift support, they must define or state their case for support; they must identify a thorough plan with goals and timelines; they must identify likely sources of support; and, they must employ the most effective methods for acquiring their support. Also, based within each of these components are nine key donor motivational factors which Brakeley (1980) identified as important for development officers to consider when trying to raise funds:

1. Individuals, corporations, and foundations have money to give.
2. The right person or persons ask them, at the right time, and in the right circumstances.
3. People have a sincere desire to help people.
4. People wish to belong to or be identified with a group or organization they admire.
5. Recognition of how vital their gifts can be satisfies a need for a sense of personal power in many people.

6. People have received benefits - often, personal enjoyment as from a symphony orchestra - from the services of the organizations and wish, in turn, to support it.

7. People give because they "get something" out of giving.

8. People receive income and estate tax benefits from giving.

9. People may need to give; that is, altruism may not be an option but a "love or perish" necessity for many people." (p. 26)

Given the organizational strategies of fund raising campaigns plus donor motivations for giving, there remain several important questions which development officers must ask themselves. How cost effective is my program? Are we setting our goals too high? Are we setting goals too low? Are we really effective in our program? Are we utilizing our volunteers effectively? Is our budget adequate? What areas in our fund raising program should we emphasize in the coming year/s? How might we better utilize our staff? Do we really know what affects our fund raising success? Are there unique institutional characteristics which we have not promoted? Are all of our potential constituencies being approached?

There are numerous variables which affect fund raising success, and some institutions have been able to identify and capitalize upon them. There is a need to know more about these variables and their association with various gift income levels.

Statement Of The Problem

The problem to be investigated in this study was to determine which of several institutional characteristics were associated most closely with an institution's gift income and to determine which fund raising practices and programs were utilized in selected institutions.

In conducting this research several institutional characteristics possibly related to gift income were identified. An analysis of support sources by type which comprise the total gift income figure were undertaken. Also, specific fund raising program components were examined.

As federal and state appropriations decrease, institutions must look toward private gift support for opportunities to augment their budgets, improve upon their programs, increase their endowments, and enhance their "margin of excellence" opportunities. To undertake effective fund raising efforts, development officers need to understand which factors seem to influence their gift income figures. As such, several major questions delineate this problem. They are:

1. Are there certain financial resource variables such as: number of alumni, federally sponsored research grants, state legislative appropriations, and student financial aid appropriations which are closely associated with gift income?

2. Are there inherent institutional variables such as: age of the institution, total head count enrollment, in-state enrollment, cost of attendance, total number of graduate students, endowment market value, the number of institutional advancement professionals, and educational and general expenditures (E & G) which are closely associated with gift income?
3. Are there differences between and across class of institution and gift income? Those institutional classifications are: Research I, Research II, Doctoral-Granting I, and Doctoral-Granting II.
4. Are there differences between institutions with higher and lower giving levels from the following gift sources: alumni, non-alumni, corporations and businesses, foundations, and other groups and sources?
5. Are there distinguishable institutional traits such as academic programs, location, an institution's commitment to fund raising, and program strength which are closely associated with gift income?
6. Are there certain fund raising organizational variables such as: structure, number of staff, goal setting, planning, budgets, and the number of years the institution has been involved in organized fund raising, which are closely associated with gift income?

7. Are there certain fund raising program variables such as: annual giving, major gifts, deferred giving, corporate giving, and foundation giving which are closely associated with gift income?

8. Are there certain solicitation methods such as: direct mail, phonathons, written proposals, and personal solicitations which are closely associated with gift income?

9. Are there certain areas in the fund raising program which have been emphasized the last three years which are closely associated with gift income?

10. Are there certain areas in the fund raising program which will be emphasized during the next three years which might be closely associated with gift income?

11. Are there differences between and across regions of the country and gift income? Those regional classifications are: East, South-East, Mid-West, West, and Southwest.

Hypotheses

Several hypotheses identified with gift income and the fund raising program were formulated:

1. There will be no significant relationship between gift income and each of the financial resource variables. The financial resource variables considered in this study were: number of alumni, federally sponsored

research grants, state legislative appropriations, and student financial aid appropriations.

2. There will be no significant relationship between gift income and each of the inherent institutional variables. The inherent institutional variables considered in this study were: age of the institution, total enrollment, in-state enrollment, cost of attendance, total number of graduate students, endowment market value, number of institutional advancement professionals, and educational and general expenditures (E&G).
3. There will be no significant relationship between and across Carnegie type of institution and gift income. Those institutional classifications considered in this study were: Research I, Research II, Doctoral-Granting I, and Doctoral-Granting II.
4. There will be no significant relationship between institutions with higher and lower giving levels from the following funding sources: alumni, non-alumni, corporations and businesses, foundations, and other groups and sources.
5. There will be no significant relationship between each of the distinguishable institutional traits and gift income. The distinguishable institutional traits considered in this study were: location, academic

programs, program strength, institutional commitment to fund raising, reasons for giving, and other institutional policies.

6. There will be no significant relationship between each of the fund raising organizational variables and total gift income. The fund raising organizational variables were: structure, number of staff, goal setting, planning, budgets, and number of years the institution has been involved in organized fund raising.
7. There will be no significant relationship between each of the fund raising program variables and gift income. The fund raising program variables considered in this study were: annual giving, major gifts, deferred giving, corporate giving, and foundation giving.
8. There will be no significant relationship between each of the solicitation methods of fund raising and total gift income. The solicitation methods considered in this study were: direct mail, phonathons, written proposals, and personal solicitations.
9. There will be no significant relationship between the emphasis placed on certain areas in the fund raising program and total gift income. The emphasis variables to be considered in this study were those identified by the development executive.

10. There will be no significant relationship between the emphasis to be placed on certain areas in the fund raising program for the next three years and total gift income.
11. There will be no significant difference between certain regions of the country and total gift income. The regions of the country were: East, South-East, Mid-West, West, and Southwest.

Purpose Of The Study

The purpose of this study was to identify institutional characteristics and fund raising programs and practices which were associated with gift income, so that public research universities can utilize them to increase their private gift support.

Since the decade of the 1980's is one of declining student enrollments, retrenchment, and competition for private gift support, institutions must aggressively pursue philanthropic opportunities in the most effective and efficient way. Therefore, this investigation attempted to answer questions concerning the pursuit of increasing private gift support to public research universities. This investigation was intended to provide:

A. A guideline for institutions to refer to when they are developing or evaluating their fund raising programs.

B. A planning tool for institutions undertaking short and long range fund raising planning strategies.

C. An analytical tool for examining institutional characteristics and their relationship to fund raising.

D. An instrument which will identify the characteristics of a fund raising program that are associated with gift income.

E. Specific fund raising methods and areas of program emphasis which institutions will need to implement or strengthen if they are pursuing increased private gift support.

Scope Of The Study

This study focused only on those public institutions classified by the Carnegie Council on Policy Studies (1976) as Research I and II and Doctoral Granting I and II. Private higher education institutions were excluded. The study was further limited to those public Research I and II and Doctoral Granting I and II institutions that reported their fund raising results in the 1982-83, 1983-84, and 1984-85 Council for Financial Aid to Education (CFAE) annual reports. The study included only the development or fund raising efforts of an institution, and the total institutional advancement or public relations efforts of an institution were excluded. The only sources of gift income used for analyzing funds received (gift income) by an institution were: alumni, non-alumni individuals, corporations and businesses, philanthropic foundations, and other groups and sources of support.

Significance Of The Study

This study attempted to broaden the research related to increasing private gift support to public higher educational institutions. Since relatively few studies directed at public research institutions and their fund raising programs have been undertaken, this investigation attempted to address this void. The findings of this study provide specific guidelines for evaluating the effectiveness of a fund raising program so that important policy and program questions can be addressed by the development executive.

This study is also a guideline for extending further research related to fund raising programs at other types of institutions.

Design Of The Study

The overall role of the development office is to help the institution accomplish its mission through the acquisition of private gift support. To be able to do this, facts about the institution and its fund raising program must be known. This study attempted to identify the institutional characteristics and fund raising practices which were most closely associated with an institution's gift income efforts.

In this study, gift income was the dependent variable and selected institutional variables were the independent variables. A total gift income index as well as an index of gift income from each of the five gift sources served as dependent variables. A comparison of total aggregate gift income dollars or total from each source would not be a fair one, so a common denominator type of index was developed to permit comparison on a uniform basis among institutions of different size. Gift income indices which served as the dependent variables were: (1) total gift income dollars, (2) total non-alumni dollars given, (3) total corporation/business dollars given, (4) total dollars derived from foundations, and (5) total dollars from other sources, exclusive of alumni, each divided by the institution's full-time equivalent enrollment. Total gift income dollars given by alumni divided by the number of alumni constituted the sixth gift income index.

Institutional characteristics serving as independent variables were both financial and inherent. Financial characteristics were:

1. Number of alumni
2. Federal research grants
3. State Legislative appropriations
4. Student financial aid

Inherent characteristics were:

1. Age of the institution
2. Endowment market value
3. In-state enrollment
4. Total student enrollment
5. Cost of attendance
6. Number of graduate students
7. Number of advancement professionals
8. Educational and general expenditures (E&G)

All variables were rank ordered and the Spearman rank-difference method of correlation (rho) was used to determine which variables were most closely associated with gift income level. A multiple regression equation was used to determine those variables likely to predict the gift income index.

In addition to the study of these variables, data on programmatic characteristics were sought from the institutions ranked in the top and bottom quartiles on the total gift income index. The purpose was to ascertain if some programmatic characteristics were more closely related than others, either to high or low levels of the total gift income index.

Definition of Terms

Research I Universities

The classification identified by the Carnegie Council to include those 50 leading institutions which received federal financial support in at least two of three academic years, 1972-73, 1973-74 and 1974-75 provided they granted at least 50 Ph.D.'s in 1973-74 (plus M.D.'s if a medical school was on campus).

Research II Universities

Another Carnegie Council classification identifying 100 private and public institutions which received federal financial assistance in at least two of the three identified academic years, 1972-75 and which awarded at least 50 Ph.D.'s plus M.D.'s if applicable. At least 25 of the degrees had to be Ph.D.'s during the 1965 and 1975 academic years.

Doctoral Granting I Universities

Another Carnegie Council classification identifying those private and public institutions awarding at least 40 Ph.D.'s in at least five academic fields in 1973-74 (plus M.D.'s where applicable) or they received at least $3 million in federal support in either 1973-74 or 1974-75.

Doctoral Granting II Universities

Another Carnegie Council classification identifying those private and public institutions awarding at least 20 Ph.D.'s in

1973-74 without regard to academic field or 10 Ph.D.'s in at least three fields.

Development/Fund Raising

Those activities associated with acquiring private gift support from alumni, non-alumni individuals, corporations and businesses, and philanthropic foundations, and other groups and sources. The fund raising programs include: annual giving, deferred giving, major gifts, capital campaigns, and prospect research.

Institutional Advancement

Those programs and activities associated with promoting the institution, i.e., alumni relations, admissions, public relations, media relations, and fund raising.

Gift Income

The actual dollars received within a fiscal year from alumni, non-alumni individuals, corporations and businesses, philanthropic foundations, and other groups and sources.

Institutional Characteristics

Those variables which distinguish each institution. They are composed of certain financial resource variables and inherent institutional variables. Combined these variables can be used to discriminate one institution from another.

Financial Resource Variables

Those variables related to certain funding sources of an institution which could be associated with an institution's fund raising success. These variables were identified as: number of alumni, federally sponsored research grants, state legislative appropriations, and student financial aid appropriations.

Inherent Institutional Variables

Those variables which are innate or unique to an institution. These variables are related to specific characteristics which could be associated with an institution's fund raising success. These variables were: age of the institution, endowment market value, total student enrollment, in-state enrollment, cost of attendance, number of graduate student attendance, number of institutional advancement professionals, and educational and general (E & G) expenditures.

Annual Giving

Those funds raised or received on an annual basis which are used each year to underwrite or enhance the current operations or programs of an institution.

Major Gifts

Those funds raised which substantially enhance a program's current operating budget or are designated to substantially enhance a specific program component, i.e., scholarships, equipment, endowments, or specific program areas.

Planned Gifts

Those gifts which are planned or identified within a donor's estate which are to be received within a designated time period and which are allocated to specific program or project criteria, as identified by the donor/s.

Campaign

The fund raising efforts undertaken to raise large amounts of funds over an extended or specific time period. The funds raised are targeted for a building, equipment, endowment, special projects or other major events.

Unrestricted Funds

Those funds usually raised during an annual giving campaign which have no restrictions placed upon them. The institution determines the uses and purposes of these funds.

Designated Funds

Those funds targeted for specific areas, such as: scholarships, programs, endowments, projects, or specific purposes, as identified by the institution or the donor/s.

Case Statement

This document or statement identifies very specific institutional needs, reasons, and benefits for providing gift support. This statement presents information about and accomplishments of an institution/program, and it identifies future needs of that institution/program.

Prospect Research

This type of research is the process through which current and potential donors are identified.

Solicitation

Solicitation is the activity of implementing those fund raising techniques utilized to ask a potential donor for private gift support, i.e., direct mail, phonathons, written proposals, and personal gift requests.

Overview of the Study

In Chapter II of this study, the review of literature related to the history of philanthropy and proceeding to recent research associated with development programs and fund raising are presented. In Chapter III, the methodology and procedures for the study are identified. In Chapter IV, the results of the data on the total gift income index and all the gift source variables are presented. In Chapter V, the results of the data on the top and bottom ranked institutions and their gift income index analyses, their institutional characteristic variables, and their fund raising program practices are presented. The summary, the conclusions, and the recommendations for this study are presented in Chapter VI.

Chapter II

REVIEW OF RELATED LITERATURE

The purpose of this chapter was to examine the relevant literature regarding philanthropy and to relate this literature to the goals and purposes of this study. First, a brief history is given of philanthropy as it progressed from early European times to philanthropy in America today.

Second, the literature is examined as it related to the goals and purposes of an institution's development program. Finally the most relevant literature related to fund raising potential, fund raising effectiveness, and components of a fund raising program are summarized.

History Of Philanthropy

The impact of the Christian Church on Western man during the first four centuries was evident with the doctrine and practice of private generosity for the public good, or charity as the Christian Church called it. According to Marts (1966), the Christian Church, its leaders, and its members, were taught that it was far better to give than to receive. It was a Christian's responsibility to care for the poor, the inflicted, the blind, and the forgotten. With the beginning of the fourth century and the demise of the pagan Roman Empire, the Christian Church became the influential force and recognized religion for person-to-person generosity, or alms giving. Through the influence of the Christian Church man became more civilized and more tolerant of those less fortunate than himself.

Through the organization and support of the Christian Church such agencies as hospitals, orphanages, and homes for the helpless were established. Additionally the Christian Church provided the structure and leadership for educating both the populace and the wealthy classes during those formative centuries. A basic liberal arts education of grammar, dialectic, and rhetoric was provided by the Church leaders. As Marts (1966) described, even "the founding and support of the first universities was left entirely to the private initiative and agencies of the Christian Church. University life was modeled after life in the cloister of the monastery, though the students were not members of a monastic order." (p. 74)

Antecedents for Educational Philanthropy

In addition to the leadership of the Christian Church and the charitable agencies and educational institutions which they established, Marts (1966) noted the impact of such monarchs as Louis IX and his generosity for establishing the first endowed college for the Society of Poor Masters Studying Theology. The Sorbonne, as this college was known, was built by Louis IX because of his admiration for Robert de Sorbon, Louis IX's esteemed theologian and chaplain. Such other universities as Bologna University and Oxford and Cambridge Universities were also established by the private generosity of individuals who wanted to provide or participate in the gathering of a small community of scholars.

Life during the fifteenth through seventeenth centuries was difficult and oftentimes bloody. Greedy rulers seeking greater wealth and possessions caused bloody warfares between most European nations. England's stability was threatened by the instability of monarchical leadership, the poverty of the cities and towns, the weakening of the Church, and the overall poverty of the masses. To address the social unrest of the times and to establish the passage of the Tudor Charitable Laws, the English Parliament sought King Henry VIII's and later his daughter, Queen Elizabeth I's support. As Marts (1966) described:

> The Tudor Charitable Laws legalized private generosity for the public service of the poor, religious and business leaders took up the responsibility for encouraging men and women to give generously of their means to build and endow schools and colleges, orphanages, almshouses, hospitals, welfare stations and old people's homes. They poured out their funds generously in amounts large and small (p. 97).

The English conscience for creating a better and more nobler world through education and private generosity was the cornerstone for American philanthropy. As Marts (1966) identified,

> . . . philanthropy was a term which Dr. Jeremey Taylor used in 1650 in a sermon he gave in London. This term with Greek roots: philo meaning love and anthropos meaning all humanity provided dignity to the former term charity (p. 99).

Those first British settlers who arrived on American soil in the early 1600's inherited from their mother country the habit, the conscience, and the methods for philanthropic giving. This inheritance laid the foundation for the diverse and responsive educational and social welfare system in America. Whether settlers arrived for religious, political, or economic reasons, their underlying ambition was to build and live in a better New World.

Beginnings of Higher Education Philanthropy in America

The first college in the American colonies was established in 1636 through the philanthropic generosity of Reverend John Harvard. After his death, Reverend Harvard bequeathed one half of his small estate plus his library collection for the establishment of a college. While Reverend Harvard provided the lead gift for the college, it was not enough to sustain it through many of its financial difficulties. To address these financial problems, Curti and Nash (1965) noted that the Massachusetts Bay Colony selected three clergymen, Thomas Weld, Hugh Peter, and William Hibbins to solicit money in England for both the college and the colony. They were commissioned to raise money without engaging in any dishonorable begging. Cutlip (1965) also noted that these three fund raisers convinced their supporters that the money they provided the college would also assist with the education of the heathen American Indian.

Upon their successful return from England, these fund raisers expressed their need to distribute promotional materials to arouse interest in their potential English donors and throughout the New England colonies. Thus, New England's First Fruits was published. This first American fund raising brochure described Harvard's academic program, its college's needs, and the importance and impact of philanthropic support to the college.

Harvard was not the only financially unstable college. The college presidents at Yale and William and Mary also had to solicit funds for their colleges' survival. They accepted gifts in various forms: outright cash gifts, estate gifts, gift of volunteer's time, and gifts from the land, i.e., bushels of grain, lumber, and brick. Each college relied upon the president to solicit gifts. Most times the president individually called upon men and women of means to support his cause but as Marts (1953) noted, often a college president preached in the pulpits on Sundays, because philanthropic giving was very closely related to the church's efforts to raise money.

Individuals who were successful fund raisers, such as Benjamin Franklin were often recruited for helping many fund raising endeavors. Franklin, like others, methodologically outlined each campaign by first identifying his potential donors then personally contacting each one. Once, when he was asked to help fund raise for a Presbyterian Church in Philadelphia, Franklin declined but he provided this advice:

> . . . In the first place, I advise you to apply to all those whom you know will give something; next, to those whom you are uncertain whether they will give anything or not, and show them the list of those who have given; and lastly, do not neglect those whom you are sure will given nothing, for in some of them you may be mistaken (p. 97).

During the late 1700's there was a growing interest in establishing colleges with secular and civic control, rather than denominational affiliation. With the leadership and philosophical idealogies of such men as Thomas Jefferson and Thomas Paine a few of what were described as public state institutions were established before 1800. As Marts (1953) noted those institutions were: the University of Georgia, 1785; the University of North Carolina, 1789; the University of Vermont, 1791; and, the University of Tennessee in 1794.

Higher Education Philanthropy 1800-1900

The Dartmouth Case of 1819 was very important in American history, because it legalized the existence of a private sector in

American higher education. While there had been a growing interest in transferring some colleges created by private philanthropy to control by the state, this famous case made it possible for Americans to voluntarily support their private colleges while at the same time establish separate public institutions.

Thomas Jefferson, an influential man in many facets of American history was credited with what Brubacher and Rudy (1976) described as establishing America's first real state university in 1825, the University of Virginia. From the beginning it aimed to give more advanced instruction than the existing colleges, it permitted students an opportunity to specialize, and it gave them the privileges of election. When the university began, its curriculum was much broader than was customary with the other colleges and, most importantly, its constitution made it a thoroughly public enterprise, rather than a private or quasi-public one. The institution was distinctively secular and non-denominational with all governing powers resting in the hands of a board of visitors. This board was appointed by the governor and confirmed by the legislature. In addition, the state of Virginia supported the university by investing in its original buildings and its library, and by providing equipment and annual appropriations of money.

Governmental involvement in public higher education was intensified with the Morrill Act of 1862. Marts (1966) believed the Act encouraged states to create and maintain state universities, for it made possible grants of western public lands to states for educational purposes. Subsequently, with this assistance, many states established universities, agricultural colleges, mechanical and industrial universities, and other specialized institutions. A dual system of governmental assistance and private support made possible the establishment of many institutions of higher education.

Between 1865 and the early 1900's industrialization in America reached record heights. With the economic growth came a new breed of wealthy men whose philanthropic generosity immortalized their names in many educational institutions, organizations, and civic projects. Such names as Rockefeller, Stanford and Packer were among the more prominent. As Scott (1983) reported, this early philanthropy was rather random and uncoordinated but nevertheless these philanthropists were well aware of the power their money could command. In addition to creating many new colleges as well as expanding the size of many existing colleges, these wealthy entrepreneurs transformed the curriculum and the clientele of American higher education. Their demands for a more practical curriculum to train technical managers and to provide the scientific education needed for the industrial demands of the times, caused a reorientation and an expansion of the college curriculum. In addition, the upsurge in support for establishing a truly American "university" was also underway. Such educational leaders as Charles W. Eliot, William Rainey Harper, Henry Tappan, Andrew D. White, G. Stanley Hall, David Stein Jordan, William Watts Falwell, and Daniel Coit Gilman all provided the vision as well as the leadership for shaping the modern American university.

With the philanthropic support of the wealthy new industrialists plus the impetus for creating the American university such institutions as the University of Chicago, Stanford University, John Hopkins University, Cornell, and Duke University were established. The University of Chicago, for example, was established by John D. Rockefeller. As Curti and Nash (1965) noted, when the old University of Chicago, a feeble school connected to the seminary, closed its doors in 1886 it provided Rockefeller an opportunity to establish a truly great university; to meet the demands of a rapidly growing city; and, to assist the rapidly expanding Middle Western Baptist's. As a devout Baptist and as one also interested in establishing a university, Rockefeller agreed to establish this potentially great university but on the condition that Middle Western Baptists plus Chicago businessmen also contribute. With an initial gift of six hundred thousand dollars plus the contribution of four hundred thousand dollars by the Middle Western Baptists and the Chicago businessmen, the new University of Chicago was established.

Many of the other universities founded during this period were also established with particular goals in mind. Some were the results of memorials, others to address the needs of a specific curricular focus, and others the need to immortalize a name. Stanford University in California, for example, was established for memorial reasons. Mr. and Mrs. Stanford's contribution of an estimated sum of twenty million dollars was given in memory of their deceased son, Leland Stanford, Jr.. Mr. Stanford's success as a railroad magnate provided the income for their gift.

Higher Education Philanthropy 1900-1950

In conjunction with philanthropic appeals for educational needs and the establishment of American colleges and universities, there was also a very strong outcry to support numerous public service agencies. In the years from 1900 to pre World War I, the demands on the public to give money and the techniques to raise funds grew very rapidly. Those years saw the start of the Boy Scouts, the Girl Scouts, the American Cancer Society, the National Tuberculosis Association, the National Association for the Advancement of Colored People plus scores of other leagues, associations, and agencies. As Cutlip (1965) described, the outcry for support from so many of these organizations led to structured techniques for fund raising, the public fund drive, the Community Chest, plus the employment of public relations and fund raising experts, so that more professional pleas for support could be made.

Cutlip (1965) also noted that:

> With the increasing demands for publicly donated money came equally strong-voiced demands for system and efficiency in its solicitation. Organization leaders joined with the donors, particularly the bluntly critical businessmen, to echo Rockefeller in urging that "this business of benevolence" be more efficiently organized (p. 38).

The leadership for efficient fund raising came with the campaigning of the Young Men's Christian Association. Led by two devote Christian YMCA workers, Charles Summer Ward and Lyman L. Pierce plus an Episcopal bishop, William Lawrence, the intensive whirlwind campaign strategy got underway. As Cutlip (1965) described:

> The whirlwind, intensive campaign to raise large sums of money in a short period of time by bombarding the public with surefire appeals and by recruiting scores of volunteers to solicit many times their number. . . these successful techniques were soon utilized in the annual appeals of other gift supported agencies to build hospitals, churches, colleges, civic centers, YMCA's, YWCA's, Boys Clubs, and to finance national health and welfare associations (pp. 38-39).

The creator of the intensive campaign strategy was Charles S. Ward. Since he couldn't spend his time developing YMCA programs because he needed to raise funds, he decided to organize a fund raising campaign which would last only a short period of time within each year, so the rest of the time he could spend on programming. His plan worked, and he was quickly recruited to help rescue other YMCA campaigns.

Lyman Pierce, later to be a colleague of Ward, was also a successful fund raiser. In 1902 Pierce was authorized by his board of directors to raise $300,000 for a new YMCA building in Washington, D.C. In two years he raised $270,000 but as Cutlip (1965) noted, the campaign was long, the publicity was rapid, and the contributions were beginning to phase out. Pierce asked Ward to help him raise the additional money. With a pre drive dinner, the recruitment of notable citizens to chair their committees, the use of paid advertisements, and the setting of a specific time limit for the campaign, Pierce successfully completed his campaign. As Cutlip (1965) noted:

> The collaboration of Ward and Pierce produced the modern fund raising campaign techniques: careful organization, picked volunteers spurred on by team competition, prestige leaders, powerful publicity, a large gift to be matched by the public's donations, careful records, report meetings, and a definite time limit (p. 40).

The demands of the early twentieth century brought meaningful changes in the devices, strategies, and solicitation techniques of fund raising. As Cutlip (1965) described, this was a time which brought the multimillion-dollar foundation and its wholesale philanthropy; the Ward-Priece short term fund raising campaign; the penny seal; the use of alumni support with educational campaigns; and an increasing number of non-profit agencies.

Emergence of Professional Fund Raisers

During the post World War II years, many of the successful fund raising leaders joined together in business partnerships. Their goal was to service the needs of colleges, hospitals, and other community service agencies. The establishment of these fund raising and consulting firms provided a much needed structure and directed purpose to fund raising. They counseled organizations, provided publicity and donor solicitation strategies, and in the case of the John Pierce Jones' firm, they provided research, careful record keeping, and thorough planning to each fund raising endeavor.

Evidence of the successful use of fund raising counsel took place in 1919 when Harvard announced a $10 million drive for a teacher's endowment fund. Employing the services of Jones and his partner Robert Duncan, the Harvard campaign was undertaken with careful organization and follow through. Jones placed a strong emphasis on publicity and specific solicitation strategies. As Cutlip (1965) described:

> Efforts to obtain gifts were preceded by an intensive, intelligent publicity program documenting the service which the university, by the training of young people and the research work of its professors, had furnished the nation. The educational program made clear Harvard's pressing needs, as well as her opportunities for greater service, if the money were given to her . . . Jones made it clear to his associates that he sought to develop enthusiasm for giving to Harvard by dignified means . . . the publicity must reflect the nature of the institution and that donors must be shown reasons for giving (pp. 173-174).

Jones stratified every solicitation appeal. With his staff, he divided the United States into divisions and districts with an appointed chairman and a campaign quota to meet. In major cities, campaign committes were appointed. As Cutlip (1965) pointed out:

> Stag smokers, luncheons, and dinners were staged in every city. . . rivalry - a stimulus always exploited by the shrewd fund raiser - was stimulated among the classes of Harvard and among the many Harvard clubs. Publicity . . . stressed that there was a great need for educated men in all important walks of life and that Harvard was producing educated men of the highest culture (p. 174).

When the campaign was over in 1919, $14,200,000 had been raised. Harvard's success and leadership provided a model and stimulus for the other educational institutions to hire professional fund raisers, to emphasize publicity as an important fund raising tool, and to recognize that the traditional ways of financing an educational institution were passe.

Development of Trusts

In addition to individual donors, large gifts for the improvement of educational and civic endeavors were also initiated through the establishment of trusts and foundations. Trusts came into existence in America in the late 1700's.

Benjamin Franklin is recognized as one of the first to establish the trust concept in America. In 1791 he made a bequest of 1,000 pounds to each of the cities of Philadelphia and Boston. According to Hollis (1938), Franklin's loan was to assist young married artificers of good character. The principle of his bequest was to remain intact for one-hundred years. At the end of the first one hundred years, the major portion of the fund was to be disbursed. Hollis noted that in 1908, Philadelphia used $133,000 of its fund to endow the Franklin Institute while Boston in 1904 used its $408,000 to build Franklin Union. The remaining amounts from each fund were to be reinvested for another one hundred years until 1991.

Hollis (1938) also identified another individual by the name of James Smithson, who in 1829 established a trust to increase the diffusion of knowledge to man. The Smithsonian Institute in Washington, D.C. is named after him.

Creation of Foundations

In addition to the benefits of trusts, today the term foundation is used to describe a type of philanthropic trust fund or endowment which is established independently of any university, institution, corporation, or hospital. The foundation is usually incorporated under the laws of a given state and given a non-profit status. Its trustees have the responsibility of distributing the annual income according to the policies set forth by the foundation (Marts, 1953).

The first independent foundation given national prominence in America was the Peabody Education Fund established in 1867 by a gift of $3,000,000 by George Peabody. According to Marts (1953) the trustees of the foundation were to use the fund to help educate the children and youth, both black and white of the distressed South. In addition, the foundation was to be instrumental in the development of the state system of public education in the South.

With the beginning of the twentieth century came a rapid acceleration of foundation establishment. The leadership for the establishment of these foundations is given to the John D. Rockefeller family. The largest portion of their family fortune was dedicated to philanthropy. In 1902 John D. Rochefeller provided $1 million of seed money to the General Education Board. In 1905, an additional $10 million allowed it to effectively operate. According to Scott (1983) the objective of the General Education Board was to promote a comprehensive system of higher education in the United States. That meant assistance to agricultural education, furthering the efforts of the Peabody Education Fund, assisting elementary and secondary education needs, helping colleges and universities, and expanding and professionalizing medical education.

In 1910 Rockefeller decided to create the Rockefeller Foundation. According to Flexner (1952) Rockefeller felt that since his family fortune was derived from sources around the globe, the Rockefeller Foundation would assist whenever there was noble work to be done. Like the General Education Board, the Rockefeller Foundation studied problems and situations and assisted whenever there was a need. Marts (1953) noted that the three generations of Rockefellers also established the Laura Spelmen Rockefeller Memorial, the International Educational Board, and the Rockefeller Brothers Fund. With the service of dedicated trustees, the Rockefeller foundations and funds provided effective support and service to both national and international endeavors.

Another man of prominence and philanthropic generosity was Andrew Carnegie. Through the wealth he amassed in the iron and steel industry, Carnegie was responsible for raising the intelligence of the masses by providing support to libraries and laboratories throughout the United States. Additionally he founded the Carnegie Foundation for the Advancement of Teaching, the Carnegie Institution of Washington, and the Carnegie Foundation to name just a few. Like Rockefeller, Carnegie attempted to be constructive with his gifts to education, to science, and to many of the social agencies of the time. Hollis (1938) described Carnegie's philosophy for philanthropic support as "find the efficient man and enable him to do his work." (p. 77)

Carnegie's interest in the betterment of college professors was evident when he assigned the Carnegie Foundation for the Advancement of Teaching its first task - the underwriting of a nationwide system of pensions for college professors. This along with his interest in helping the small less known colleges to get established helped memorialize his name throughout the United States. With Rockefeller's and Carnegie's leadership, combined with the generosity of numerous other wealthy entrepreneurs, over forty-one foundations had been established during the first three decades of the twentieth century. Since that time an estimated twenty-two thousand private foundations are in active service today.

Corporate Philanthropy

In addition to wealthy entrepreneurs and the creation and utilization of trusts and foundations, the American business sector played an additional role in American philanthropy. In 1935 major corporate involvement was realized. With the passage of the 1935 Revenue Code, corporations were permitted to deduct up to 5% of their net income for philanthropic endeavors. While many corporate executives saw this as a way to service public needs and to be perceived as good corporate citizens, educational fund raisers saw this as an opportunity to acquire larger gifts. Through written proposals and personal solicitations, fund raisers aggressively pursued corporate support for outright cash gifts, gifts of land, scholarship and equipment gifts, plus gifts to endowment.

In response to increased corporate solicitations, numerous corporations established their own foundations to assist them in their philanthropic endeavors. According to Marts (1953), the corporate foundation was created as a nonprofit corporation with a set of officers or trustees authorized to distribute gifts according to the policies and procedures outlined by the foundation. Each year the stockholders authorized a certain percentage of the corporation's net profits to be distributed according to the trustees guidelines. In this way, consistency and equality were given to all proposals and solicitations made to the corporation.

Even as America struggled through major world wars during the four decades of 1910-1950, American philanthropy did not decrease.

Even during and after each war, the outpouring of gifts to educational institutions, communities, and public service agencies remained unprecedented. Americans truly have had a basic spiritual and patriotic belief in world peace, and as such, they have been responsive to activities and projects which display public concern. Because of this, fund raising activities during periods of war were not halted, but they became focused and very effectively undertaken (Marts, 1953).

Higher Education Philanthropy Since 1950

The 1950's and 1960's were a period of growth in American higher education. The prolonged crisis of the cold war provoked unprecedented levels of federal, state, and corporate investment in higher education. The need for national defense, a space exploration program, and a technically sophisticated labor force prompted intensive funding from both the public and private sectors (Scott, 1983).

In 1953 the Ford Foundation received a windfall inheritance of $2 billion after the deaths of Henry Ford and his son Edsel. The Foundation earmarked this money for higher education and placed it in a sub-division of the Ford Foundation known as the Fund for the Advancement of Education. The purpose of this fund as noted by Scott (1983) was to provide venture capital to stimulate structural innovations in education. In 1955 alone, the Ford Foundation distributed over $500 million to American colleges, medical schools, and hospitals. Their leadership and generosity provided the impetus and direction for other corporations to follow their lead.

In 1953 another important corporate cooperative emerged, the Council for the Financial Aid to Education. This Council was founded with funds from the General Education Board, the Sloan Foundation, the Carnegie Corporation, and the Ford Foundation's Fund for the Advancement of Education. The purpose of the Council for Financial Aid to Education was to stimulate broad corporate participation into large-scale giving. As Scott (1983) described:

> Sitting on its board of directors were 16 leading corporate executives and 12 university presidents . . . the CFAE, indeed, became the chief vehicle for ensuring the collectivizing corporate attentiveness to its higher education investments. Without directly soliciting funds for individual institutions, the CFAE has advised corporations on procedures and goals for wise investments, especially in the private sector (p. 61).

Today, the CFAE continues to be an influential force in corporate philanthropy and it continues to publish its annual report detailing philanthropic patterns and areas of emphasis throughout the United States.

Since 1954-55 comprehensive annual reports detailing philanthropic patterns of giving have been undertaken through the combined efforts of the Council for Advancement and Support of

Education (CASE). These reports provide valuable information to the development executive whose goal it is to increase private gift support to their organization.

Another significant organization which has had tremendous influence on improving the quality of philanthropy in America has been the American Association of Fund-Raising Counsel. Formed in 1935 by a group of fund raising professionals, this association's purpose is to exhange fund raising ideas and techniques and to improve upon those which are currently used. Throughout the years, this association and its members have assisted educational institutions with their fund raising; they have improved upon several fund raising techniques; and they have been responsible for the annual publication, GIVING IN USA, which details comprehensive statistics or specific gift sources, gift recipients, and the overall impact of philanthropy in America today.

In 1974 the merger of the American Alumni Council and the American College Public Relations Association resulted in the formation of the Council for the Advancement and Support of Education (CASE). Since institutional advancement is an umbrella term for the coordination and work of alumni relations, public relations, and fund raising, the merger of these two organizations has resulted in the establishment of an association which services over 10,000 advancement professionals. Each month CASE conducts a wide variety of professional development programs on fund raising, alumni relations, government relations, publications, information services, and public relations. Through the efforts of CASE, advancement professionals are provided the network and services for strengthening their own professional performance and for those of their institutions and organizations.

With the tremendous expansion of educational institutions and programs between 1950 and 1966 came a large increase in philanthropic support to educational institutions. Both federal and state governments and the American people responded to this expansion by investing in education--its goals and its ideals.

During the late 1960's and the early 1970's there was a significant drop in philantropic support to educational institutions. While the problems surrounding campus unrest may have had negative impact on American's giving, several other factors might have been responsible for their decline. It was during this period that the American economy was lethargic, inflation rates were high, and several tax acts had a negative effect on American spending power. Salary raises were not keeping up with the double-digit inflation rates. Thus, all of these factors played a significant role in the stagnation of philanthropic giving in America.

During the mid 1970's enrollment growth slowed as institutional expenditures increased. This trend along with the slower rates of philanthropic support caused many public institutions to examine the possibility of structured fund raising programs. The impact of many public institutions' involvement with agressive fund raising efforts was evidenced in 1978-79 when there was a higher rate of voluntary support to public institutions than to private institutions. Additionally, there was also a higher growth rate of fund giving for professional and specialized schools.

In 1978-79 the total voluntary support of higher education was $3.23 billion. In 1984-85, it was $6.32 billion, an increase of 95.7%. The increased amount of support during this period was due to several factors: (1) lower inflation rates, (2) increased giving by corporations (3) greater economic stability, and (4) focused and well-organized fund raising programs and campaigns.

Today, the need for experienced and well-trained development officers is crucial. As public institutions aggressively pursue private gift support, it is imperative that these professionals work in the most professional and well organized manner, that they constantly seek effective and efficient methods for fund raising, and, most importantly, that they maintain a very high level of integrity and sensitivity to the needs and wants of their donors.

Research Related To A Development Program

All educational institutions are involved with some facet of alumni relations, public relations, and fund raising. The interrelationships of these three areas is integral to an institution's image and it's fund raising efforts. Development is a term used to describe the policies and programs utilized for fund raising. Seymour (1966) described the role of a development office as promoting all three legs of the fund raising tripod - occasional capital campaigns, consistent annual giving by all elements of the constituency, and the promotion of deferred giving through bequests and living trusts. An indirect role in the area of public relations, he said, was to sustain a critical awareness and a lively concern for the ways in which the institution deals with the arts and graces of appreciation, hospitality, responses to criticisms, and all the other major processes of dealing with its constituency - past, present, and future. This awareness and concern are what he considered the very lifeblood of development. According to Brakeley (1980), successful fund raising depends on the steady application of multiple techniques in such diverse areas as annual giving, deferred giving, capital giving, and so forth. In the context of a carefully thought out plan, an institution's philanthropic needs and likely sources of support will be realized. He cautioned that fund raising is not a 'one shot' proposition, rather, he said, fund raising is or should be a central and continuous element of every not-for-profit organization and operation.

While goal setting and planning are imperative components of fund raising success Pray (1981) indicated that:

> . . . many of the individual gifts from alumni and friends are made as the result of memories, trust and confidence in the leaders of the institution, or a thread of commonality of interest which has been created between individual interests and sound institutional programs (pp. 7-8).

According to Broce (1979) there are nine basic fund raising principles which are cardinal rules of fund raising. Every fund raising professional should apply them either to a major capital campaign or to the on-going annual giving program. He listed the following fund raising principles:

1. Institutional or organizational objectives must be established first.
2. Development objectives must be established to meet institutional goals.
3. The kinds of support needed determine the kinds of fund raising programs.
4. The institution must start with natural prospects.
5. The case for the program must reflect the importance of the institution.
6. Involvement is key to leadership and support.

7. Prospect research must be thorough and realistic.
8. Cultivation is the key to successful solicitation.
9. Solicitation is successful only if Cardinal Principles I through VIII have been followed (pp. 17-25).

The Organizational Structure

As an agency of the university, the development office's success and focus for raising funds is its involvement with the institutional planning and goal setting process identified by the central administration and its trustees. For it is through this planning that goals are identified, resources are allocated, and strategies for accomplishing those goals are identified.

Central to the development planning process is the organization and management of the development office. As Shea (1977) noted, the organization chart begins with the president. An effective working relationship with the president is imperative if the development officer is to achieve the goals outlined by the central administration and its trustees. Common to all development officers and chief administrators are such responsibilities as Grasty and Sheinkopf (1982) identified. They were the selection of personnel, the coordination of work, the budget recommendations, and the training of paid staff, and volunteers.

Most importantly, it is the chief development officer's responsibility to formulate the case or justification for asking for voluntary support for the institution. The case statement as

Pray (1981) described it is the sales tool for development. It begins with a persuasive statement of the reasons for the continued existence of the institution, the role the institution plays and proposes to play in our society, and the rationale for the program. It provides convincing evidence to the prospective donor that both current and estate gifts will be wisely administered and that the funds will certainly advance human and educational goals in both real and specific ways.

The Fund Raising Market and the Techniques

After development plans have been established, potential funding sources need to be identified. According to Brakeley's (1980) recommendation, almost every individual or organization which is benefiting from or affected by the institution's programs and activities should be considered as a potential source of philanthropic support. Kotler (1981) believed there are four major donor markets to consider when soliciting for support. They are: individuals, corporations, foundations, and governments. By individuals he included: alumni, non-alumni, friends, trustees, administrators, parents, faculty, staff and current students. Each of these markets could be solicited through such fund raising techniques as direct mail campaigns, telephone solicitations, written proposals, and personal appeals. Again, the fund raising programs through which these markets are solicited include annual giving, major gifts, corporate/foundations, planned giving, and capital campaigns.

The fund raising literature contains numerous "How To" publications identifying techniques for fund raising success. Some include: Tested Ways to Successful Fund Raising (1980) by George A. Brakeley, Jr; The Art of Asking (1978) by Paul H. Schneiter; Designs for Fund Raising (1966) by Harold J. Seymour; Handbook for Educational Fund Raising (1981) by Francis C. Pray; and Handbook for Institutional Advancement (1986) by A. Westley Rowland, editor.

Prospect Research

Integral to the success of any development office is the prospect research unit. This unit, as Ray (1981) described it, identifies and researches potential donors. The unit develops extensive information about each potential and current donor, so specific plans for cultivation and solicitation strategies can be implemented. The research unit is supported by an effective and extensive record keeping system which provides in-depth information on 20, 50, or even 200 individuals or corporations capable of making a major financial impact on the institution or program.

Prospect research and donor evaluation for potential gifts are extremely important to a fund raising technique known as "sequential fund raising." According to Brakeley (1980) this technique recognized that, "the greatest part of the funds sought for a campaign will come from a relatively small number of donors making sizable gifts. . . These leadership gifts will set the pace for giving at all other levels, so it is extremely important for the prospect research unit to supply the fund raising solicitor with both current and accurate information." (p. 17)

Research Related to Fund Raising

Much of the literature related to fund raising has dealt with such topics as donor profiles, organizational structures, characteristics of development officers, cost analysis, utilization of volunteers, and trustee leadership. While all of this research has implications for fund raising programs, relatively little research has addressed fund raising potential and fund raising effectiveness in public research and doctoral granting institutions.

Leslie (1969) is credited with conducting the most comprehensive research related to development operations and their effectiveness. Leslie's (1969) study was the first serious attempt at analyzing fund raising in higher education. His study was commissioned by the Board of Trustees of the American College Public Relations Association (ACPRA), and it included statistics gathered for the years 1962-68. Unfortunately, he received only a

8.75% usable response or 105 of the 1,200 questionnaires mailed. His focus was on trends in public relations and fund raising at U.S. colleges and universities. Concurrent with his questionnaire inquiry, Leslie also conducted interviews with presidents, deans, faculty, and administrative officers. He examined organizational structures, factors affecting fund raising effectiveness, and the use of staff and volunteers. He obtained general information about how advancement program activities were commonly organized, size of professional advancement program staff and salaries, what some of the promising yardsticks and evaluative criteria were for measuring fund raising effectiveness, and the efforts and expenditures being allocated to advancement programs and their results.

The term "institutional advancement program" was used by Leslie (1969) as an umbrella term which included all activities related to information services, publications, student recruitment, alumni relations and fund raising. He found that usually one manager was responsible for at least three or four advancement activities, and that four, maybe even three, professional staff members constituted an effective advancement program. When gift income is used as an indicator of program performance, he found a three year average of gift income, exclusive of deferred gifts, appropriate for use in eliminating short-term fluctuations within a given year.

Leslie (1969) found that:

- A relatively high rank correlation was found between advancement program expenditures and gift dollars received.

- The correlation became slightly higher when only fund raising and alumni relations expenditures were matched with gift income; on the other hand, public relations expenditures (information services and publications) showed much less of a correlation with gift dollars.

The cost of raising funds - advancement program expenditures as a percent of gift income - was approximately 15 to 20 cents per dollar with a wide range both ways.

- As an institution raises more money, its advancement program expenditures per gift dollar decrease.

- Private institutions that allocated the larger portions of the advancement program budgets to fund raising tended to receive slightly more gift dollars than those that allocated the larger part to public relations activities (p. 28).

In a 1971 update of Leslie's study, Seeking the Competitive Dollar in the Seventies, an interesting trend was revealed. It was that, while gift income may be higher, the cost of raising that money remained about the same or was greater. Also, private institutional costs for raising money had increased, suggesting that these institutions are pushed to approach every potential funding market. Meyer (1971) examined the status and types of fund raising programs in a randomly selected group of public and private higher education institutions. His study was criticized for inaccurate data gathering related to fund raising costs. However, he was able to conclude that there was great dissimilarity between fund raising programs and their areas of program emphasis, that more institutions needed deferred giving programs, and that the successful fund raising institutions had developed specific objectives for their fund raising programs. Ishoy (1972) examined the functions of a development organizational entity and the benefits realized as a result of the investment of people and money into the program. He contacted 120 institutions and found little relationship between staff, budget, and goals, except in colleges with less than 2,000 students. He did conclude, however, that long range planning was important to the success of the development program and the investment in the program.

Stout (1977) focused a study on organizational and management structures to see if they had any effect on fund raising practices, sources of support, and fund raising techniques. He found that no specific organizational structure was important and that personal solicitations and phonathons were the most effective fund raising techniques.

Pickett (1977) studied fund raising potential and fund raising effectiveness. Since the present study adapted many of Pickett's ideas, the next section details his research and those of others as they related to factors affecting fund raising success in higher education institutions.

Leslie (1979) defined potential and the measurable factors influencing potential as:

> . . . the aggregate gift-dollar income that should accrue to an institution were it to employ its total resources in the most effective manner. . .resources should include directly allocated items such as advancement-program staff people and support funds along with such variables as number of affluent alumni, traditions of philanthropic support, and type of institution and academic programs (p. 60).

Leslie (1979) indicated that the management of advancement programs by both public and private institutions have grown closer together. For the most part, public universities are increasing the size of their development and alumni personnel as they intensify their fund raising efforts. He identified tangible and intangible variables which might affect fund raising potential. The tangible factors included type of institution, the number of graduate and professional schools, the academic offerings, the size of the alumni body, and the institution's location--whether urban or rural, and the section of the country. Some of the intangible factors included:

1. The effective involvement of the chief executive officer, the deans, the trustees, and the volunteers. For it is this group which can influence the realization of potential more than any other factor.

2. The hiring of a competent development officer.

3. The tradition of support which has existed over the years...giving is a habit...and people who have seen the results of philanthropic support from their student days...are far better prospects.

4. The attraction of students from higher income brackets since as graduates they tend to rise to better paying jobs and become civic and business leaders.

5. The faculty must become an integral part of the institutional advancement program (pp. 65-66). Leslie concluded his work with the realization that there are no absolutes in assessing fund raising potential but three very important management components must be involved in all institutional advancement programs, namely, planning, operations monitoring, and performance measurement.

Research Related to Fund Raising Potential and an Ideal Development Program

The most relevant research pertaining to fund raising potential and fund raising effectiveness, after which some aspects of this study has been adapted was the work of Pickett (1977). Pickett's work focused on a college's potential for fund raising by examining the institutional characteristics relative to its available financial resources; its relative position in the environment; and, the specific fund raising policies which would likely increase the gift income of private undergraduate colleges.

A sample was selected of 200 private undergraduate colleges reporting gift income to the Council for Financial Aid to Education for the 1971-72, 1972-73 and 1973-74 fiscal years. Contrary to all previous research, Pickett (1977) felt that gift income was not enough to measure fund raising effectiveness; one needed to consider a college's potential for fund raising then determine its effectiveness. Pickett used Leslie's (1971) recommendations for averaging gift income over a three year period, and identified specific variables which might determine a college's fund raising potential. He selected four variables to measure resource availability and eight variables to measure a college's environmental position. His four financial resources variables were: (1) Number of alumni; (2) Number of families with annual income over $50,000 in the Standard Metropolitan Statistical Area nearest a college; (3) Total value of grants made by major foundations in a college's home state; and (4) Value added by manufacturing in the Standard Metropolitan Statistical Area Closest to a college (p. 15). Variables used to determine a college's environmental position were: (1) In-state enrollment; (2) Cost of attendance; (3) Graduate School attendance of alumni; (4) Age of college; (5) Value of endowment; (6) Federal research and development support; (7) Tenure of president; and (8) Head count enrollment.

Using correlational analysis with gift income as the dependent variable and the twelve institutional characteristics as the independent variables, Pickett (1977) found that, of the variables he identified to measure financial resource availability, only number of alumni showed an important relationship to gift income. The variables used to measure a college's position in the environment which showed a relationship with gift income were: market value of endowment, cost of attendance, age of the college, in-state enrollment, and the percent of the senior class who entered graduate school. A multiple regression equation was used to estimate each college's fund raising potential. The percent difference between potential and actual gift income was used to classify colleges as either overproductive or underproductive. Through this classification 47 overproductive and 47 underproductive colleges were identified.

Through the review of literature, Pickett (1977) identified thirteen fund raising policies considered to be important for a development program. Those fund raising policies were: 1) resources spent on fund raising, 2) the organizational structure, 3) fund raising functions (annual giving, planned giving, prospect research and capital giving, 4) number of professional staff, 5) case statements, 6) solicitation calls, 7) use of outside professional counsel, 8) college newsletters, 9) giving clubs, 10) trustee committee for development, 11) annual President's Report, 12) size of mailing list, and 13) Honor Roll of Donors. He obtained information from the 47 overproductive and 47 underproductive institutions to identify which fund raising policies were significant with the success of the overproductive colleges and which were lacking from the underproductive ones. Using Chi Square tests of independence and Students t statistics he found the following fund raising policies to be significant:

1. Higher than average expenditures for institutional advancement.
2. A greater number of institutional advancement staff.
3. Fund raising programs composed of all four essential elements of annual giving, capital giving, deferred giving, and prospect research.

4. Larger number of names or mailing lists.
5. Existence of an institutional case statement.
6. Existence of an active trustee committee on development (p. 73).

Those fund raising policies not found to be significant were: centralizing the institutional advancement program, number of solicitation calls made, the use of outside counsel, publications, and giving clubs.

Pickett concluded that the productivity of a college fund raising program was interpreted to be a function of trustee leadership, institutional direction, and fund raising effort. His research has lead the way for further analysis of other types of institutions, i.e. public and private research and doctoral granting, comprehensive universities, etc. While his identification of financial resources and a college's position in their environment may have been applicable for his private undergraduate college research, additional variables might need consideration for other institutions. How much emphasis an institution places on certain fund raising policies might also be considered for further study.

Webb (1982) used Pickett's format for identifying a college's fund raising potential for overproductive and underproductive institutions, but he sought perceptions of respondents about what determined the characteristics of an ideal development program.

Webb's population included the State University of New York's 64 campus units. He organized them into seven categories: (a) four university centers, (b) thirteen arts and sciences colleges, (c) three centers for the health sciences, (d) six agricultural and technical colleges, (e) three specialized colleges, (f) five statutory colleges, and (g) thirty community colleges.

Webb (1982) used seven research questions to guide his study. They were:

1. What are the main criteria or characteristics of an ideal development program?

2. What are the basic output criteria for measuring effectiveness of a development program?

3. Where are representative SUNY institutions when compared to the criteria for the ideal development program compared to in question 1 above?

4. What is the relative position of representative SUNY institutions on indicators of program effectiveness referred to in question 2 above?

5. Is there a basic and meaningful relationship between the program development criteria as measured for the representative SUNY institutions and their program performance as measured by the effectiveness indicators referred to in question 2 above?

6. In the light of the empirical findings relating real program characteristics to the ideal program criteria and the

analysis relating real program characteristics to measures of program effectiveness, what would be the nature or configuration of the most realistic and most effective fund raising program?

7. How can individual SUNY institutions best take advantage of the "ideal" policy-relevant findings of this study for their development program? (pp. 41-42).

Webb drew the following conclusions from his study:

1. An expert panel identified twenty-four policy-relevant criteria for an ideal development program.

2. None of the SUNY institutions in the study met all the criteria for an ideal development program.

3. Eighty-one percent of the overproductive institutions were closer to the ideal criteria regarding organizational structure and program resources than the underproductive institutions.

4. Fifty-three percent of the overproductive institutions had higher percent averages regarding the fund raising methods and techniques criteria than the underproductive institutions.

5. Thirty-nine percent of the overproductive institutions had higher percent averages regarding fund raising sources and constituencies than did the underproductive institutions. (Abstract.)

To more closely analyze the fund raising success of public research and doctoral granting institutions, the following section will examine the research related to institutional fund raising to more closely determine which factors seem to influence an institution's gift income figures.

Research Related To Institutional and Programmatics Factors and Gift Income

Since all institutions raise differing amounts of gift income, it has been difficult to assess what factors common to most institutions, might influence their gift income levels. These factors or variables might be internally driven by certain innate institutional characteristics or policies, or they could be externally driven by certain environmental or societal demands. Research findings related to these factors and their influence on gift income will be reported in this section.

Gift Income

The amount of money received each year from certain donor sources is known as gift income. For studies to be undertaken with gift income as a variable, researchers must identify which donor categories are pertinent to their study. Each year since 1954, the Council for Financial Aid to Education (CFAE) gathers data related to private gift support to all institutions. They gather data on the following donor categories: (1) alumni, (2) non-alumni, (3) corporations and businesses, (4) foundations, (5) religious organizations, and (6) other groups and sources. Dependent upon each researcher's study, only certain donor categories are applicable to examination and evaluation.

In assessing the effectiveness of certain fund raising policies in private undergraduate colleges, Pickett used only four donor sources for this gift income variable. They were (1) alumni, (2) non-alumni, (3) corporations and businesses, and (4) foundations. He also validated the research of Leslie (1969, 1971 and 1979) and others by making use of a three year average figure for gift income rather a single year figure. It has been found that by taking the gift income figures for three years and averaging them, this procedure eliminated an inflated or depressed gift income figure which might be the result of one unusually large gift(s) in a single year or a paucity of them.

If gift income is to be a variable in any research, it is imperative that specific donor categories be identified and that gift income figures be identified for three years and averaged to more accurately identify a non-inflationary gift income figure.

Institutional Characteristics

There is tremendous diversity in the American higher education system. Institutions were founded at different times in history, for different purposes, and with unique institutional characteristics and traditions. Yet, today all these institutions have among their goals three common ones: (1) to educate students,

(2) to attain academic excellence, and (3) to raise as much private gift support as possible. To address the goal of raising private gift support, collegiate executives must be able to articulate and promote their distinguishable and unique institutional characteristics. Most importantly, they must know their constituencies, for it is their constituencies who help to make their institutions unique and create the image for the institution.

Throughout Leslie's (1969, 1971 and 1979) work he has been concerned with fund raising effectiveness. His research has focused on the costs of fund raising, the management of fund raising programs, and the variations in fund raising among various types of institutions. While no specific formula for fund raising success was suggested, Leslie identified pertinent institutional characteristics which might influence gift income.

According to Leslie (1979), there are many institutional variables which affect the fund raising potential of institutions. They are: (1) the type of institution, (2) the academic offerings of the institution, (3) the number of graduate and professional programs, (4) the size of the alumni body, (5) the affluence of the alumni, (6) the location of the institution (7) the age of the alumni, (8) the proximity to campus of the alumni, and (9) the number of years the institution has been involved in fund raising. Others were: (10) the number of grants and contracts the institution is able to attract, (11) the commitment of the institution to fund raising, (12) the type and background of the students attracted to the institution, and (13) the number of volunteers involved with the institution and its fund raising. Finally, the presidential involvement with fund raising, and the involvement and commitment of the academic community with the students and with the institution were also identified. According to Leslie (1979), institutional variables must be recognized as pertinent to an institution's case for support, and they must be fully integrated and marketed to the institution's constituency.

Pickett examined the effects of certain institutional characteristics of private undergraduate colleges on gift income. He divided his institutional variables into two categories: (1) Financial Resource and (2) the College's Position in the Environment. The results of his multiple regression analysis showed that the following four variables explained 69% of the variation in gift income. They were: number of alumni, the endowment market value, the cost of attendance, and the proportion of senior class members who attended graduate school. He used the results of this equation to estimate gift potential for the colleges.

Pickett concluded that fund raising potential was a function of a college's quality, wealth, and socio-economic level of its clientele. His research was a landmark study about the effects of institutional characteristics and certain fund raising policies on gift income potential. While his study pertained to private undergraduate colleges, the design of his work warrants further investigation and application to other types of institutions.

Fund Raising Program and Policies

To initiate the pursuit for private gift support, a well organized and goal directed development program must be established. The development officer must be engaged in many of the decision-making processes of the institution, since many of those decisions impact the direction and success of the institution's fund raising efforts. The policies and programs which guide an institution's development program are paramount to its success. But like the diversity of institutions found in the United States, there is also diversity among the types of programs and the goals and functions of development programs throughout the United States.

To synthesize the literature related to fund raising programs, the next section is divided into four parts. They are: (a) the role of the development office, (b) the management of the fund raising program, (c) the methods for raising funds, and (d) the use of volunteers.

Development's Role.

The essential task of the development office is to help the institution secure the resources it needs to fulfill its mission. To do this, a solid institutional plan must be identified. The chief development officer must be involved with the institutional planning process so decisions impacting both the academic and non-academic sectors of the institution can be clearly articulated to its constituencies. The development office must also respond to the needs of the institution. It is responsible for helping the institution meet its goals and accomplish its mission. It interprets the institution to its external constituencies. Through its responsibilities for alumni relations, public relations, and fund raising, the development office is responsible for creating an institutional image and establishing a sense of confidence in which an informed public fosters an identity with that institution. It is important for the development office and the institution to "Know Thyself." For with knowing what one is, one can direct what they want to become.

Marts (1966) identified an important quote of Aristotle's which exemplifies the importance of creating a very clear and compelling case for institutional support.

> To give away money is an easy matter, and in any man's power. But to decide to whom to give it, and how large and when, and for what purpose and how, is neither in every man's power - nor an easy matter.
>
> Hence it is that such excellence is rare, praiseworthy, and noble. (Preface)

Program Management. The effective organization of a development program is essential if the program is to accomplish its goals. Shea (1986) identified two basic organizational models: (1) a centralized model with all development functions under one officer, who reports directly to the president, and (2) a noncentralized model with no single officer directing the total advancement program. But, most recently, a third model known as a combination of the centralized and noncentralized model provides for specific decentralized autonomy with a reporting mechanism to a central development officer. This centralized/decentralized model is used at some large institutions with a constituency focused fund raising philosophy. While the centralized model is found most among institutions, the accomplishment of goals and the coordination of fund activities can be undertaken with any effective organizational structure.

The number of professional staff hired to implement the goals of a development program is dependent upon the size and the functions of the program. As Leslie (1969) pointed out, four persons and maybe even three constitute the minimum number of professional staff for an advancement program. Dittman (1981) identified three very important reference points to consider when hiring staff. They were: (1) the processes to be undertaken, (2) the constituencies to be served, and (3) the specific fund raising programs to be implemented. By processes to be undertaken, Dittman cited the administrative policies and programs which need direction, the internal and external communication articles which need to be published or produced, the various alumni and friends' programs which need scheduled and administered throughout the year, and the various solicitation methods and strategies which need to be implemented. Another process was the recognition programs which need establishing to thank donors and volunteers for their support.

When Dittman (1981) discussed his second point - the constituencies to be served - he identified the following: the alumni, the parents, and the friends. Additionally, the following could be added to his list: faculty, students, staff, corporations, foundations, and governmental groups.

The size of a development staff is also determined by Dittman's third process - the specific fund raising programs to be implemented. Dependent upon the size and age of the institution, the following programs would be essential to the fund raising efforts of an institution. They are: annual giving, major giving, deferred giving, corporate and foundation giving, capital campaign giving, and most importantly, the prospect research program. It is understood that the number of positions on a development team is influenced by the size of the constituency, the age of the college, the financial potential for gifts, and the involvement in special campaigns.

Dittman noted that the staff of a medium size college typically entails eleven professionals, plus secretarial and clerical help as required. Assuming that a college is in a campaign, Dittman suggested the following positions: (1) senior coordinating officer, (2) alumni program director, (3) public relations director, (4) assistant public relations director, (5) annual giving director - alumni and large gift clubs, (6) assistant annual giving director - parents and friends, (7) assistant annual giving director - corporations and foundations, (8) capital gifts officer, (9) assistant capital gifts officer, (10) deferred and planned gifts officer, and (11) research assistant (p. 230).

The institutional commitment for development is reflected in the budget allocated to this area. As Leslie (1979) found, the portion of educational and general budget (E & G) allocated to the advancement programs is one direct measure of institutional commitment. While E & G budget percentages vary from institution to institution, it is also very difficult to assess budgets and costs of fund raising programs across the nation, because no common measure for identifying the data has been established. However, the first step in establishing a budget is to identify the goals of the program. Once these are identified then a budget can be designed. Another interesting part of the budget plan is to identify the fixed and variable costs of the program.

Knowing there are fixed costs related to personnel and variable costs related to travel, entertainment, donor recognition, and cultivation, these will also assist in the budget process.

The analysis of fund raising program effectiveness has been difficult. Not only are there no common measures established, but definitions identifying direct and indirect costs have not been established. As Ridenour (1986) suggests, a fair goal to shoot for is between twenty and twenty-five cents on each dollar raised.

Methods of Raising Funds. Important to all development programs are three very basic areas for raising funds. They are: the annual fund, the capital and endowment projects, and the deferred giving program. Dependent upon the age of the fund raising program, the institutional size, and institutional goals set forth by the president, each of these basic areas could be expanded to include: a major gifts area; a corporate and foundation area; and a special campaign area.

The methods through which funds are solicited include: (1) direct mail, (2) telephone, (3) written proposals, and (4) personal solicitations. Important to each of these methods or programs are the establishment of goals and objectives for the overall development program and for each of the fund raising programs. Smith (1981) identified nine important factors to consider for giving programs. They were: (1) there must be both internal and external goals which drive the program, (2) there must be confidence established among the prospective donors with the leadership of the institution, (3) there must be a convincing case statement which clearly identifies the mission of the institution, its needs, and the opportunities to be realized when those needs are met, (4) there must be an adequate staff which functions as a cohesive team, (5) there must be specific constituencies identified and properly researched, (6) there must be effective communication and cultivation strategies in place, (7) there must be an active volunteer group which can provide leadership and support to the fund raising program, (8) there must be a clear and concise knowledge about how the institution is perceived, and finally (9) there must be a state of readiness on the part of the donors to part with their funds for the particular program being identified.

As Ridenour (1986) cautions us, we must remember that ". . . at least 50 percent of our money comes from 1 percent of our donors, and 40 percent more comes from the next 10 percent of our donors - thus 90 percent of our dollars comes from 11 percent of our constituency." (p. 82) Thus, if we are to be effective in our fund raising we must first focus our efforts on our current donors, then we must implement strategies to keep them, and at the same time we must attract new donors to our program.

The Need for Volunteer Involvement. As Snelling (1986) noted, there are more than 84 million Americans over the age of twelve who perform some type of voluntary service. The value of these volunteers to development programs is immeasurable. The giving of one's time, energies and endorsements is as valuable as a monetary contribution and is the very foundation upon which an effective development program is established.

As all organizations have come to realize, volunteers are much more apt to be financial donors than those who don't volunteer. Their involvement not only expands the efforts of the development team, but they serve as a very important link to their colleagues, and they provide an external perspective of the institution. The motivation of volunteers is basic - it is to improve the quality of human life. As development programs grow and as more volunteers get involved, there are limitless opportunities to improve the American educational system as we know it today. Thoughtful planning and the identification of specific role definitions and goals are important in working effectively with volunteers. Whether volunteers are recruited to help with special events, special solicitation campaigns, or special assistance on advisory boards, they must be informed about the program and its goals. They must be adequately trained, and most importantly, they must be adequately recognized for their efforts.

While it takes a great deal of time to work with and nuture volunteers, the benefits are priceless. As an old fund raising adage describes, "people don't give money to causes - they give money to people." Since volunteers are one of the strongest and most influential forces for an institution, it is imperative that their energies be utilized. Marts (1953) quoted Tocqueville's description of the American voluntary enterprise. He said,

> These Americans are the most peculiar people in the world. You'll not believe it when I tell you how they behave. In a local community in their country a citizen may conceive of some need which is not being met. What does he do? He goes across the street and discusses it with his neighbor. Then what happens? A committee comes into existence and then the committee begins functioning on behalf of that need... all of this is done by private citizens on their own initiative...The health of a democratic society may be measured by the quality of functions performed by private citizens (p. 1).

Summary

This chapter contained the results of the review of literature and the application of that literature to this study.

The first section identified the history of philanthropy from the middle ages to the present. The second section identified the research related to a development program. The third section identified the research related to fund raising. Section four examined the literature as it related to fund raising potential and the components of an ideal development program, and the last section identified the research related to institutional characteristics and programmatic policies and goals which might affect an institution's gift income.

Chapter 3 contains a detailed explanation of the methodology for this study.

Chapter III

METHODS AND PROCEDURES OF THE STUDY

The intention of the researcher in conducting this study was to identify those institutional characteristics and fund raising programs and practices which were most closely associated with gift income.

This chapter was divided into three major sections. They are: (1) population, (2) description of the variables, and (3) the collection of data. Specific details related to each of these major sections are appropriately located within each section.

Population For The Study

This investigation focused on those public higher education institutions classified by the Carnegie Council on Policy Studies in Higher Education (1976) as: public Research I and Research II institutions; and public Doctoral Granting I and Doctoral Granting II institutions. Included within each classification was the following numbers of institutions: public Research I - 29 institutions; public Research II- 33 institutions; public Doctoral Granting I - 38 institutions; and public Doctoral Granting II - 19 institutions. (See Appendix A&B) One Research II institution was excluded from this study, because pertinent data and institutional identification was not available. That institution was the City of New York Graduate School and University Center. Therefore, the study population was 118 institutions.

After the collection of resource data for the three year period of 1982-1985 for all six of the dependent gift income variables and twelve independent selected institutional characteristic variables per institution, it was determined that some institutions should be eliminated because data were lacking. Forty-one institutions had to be eliminated because they did not report their gift income to the Council for Financial Aid to Education, they were lacking resource information, or they could not supply the information when contacted by telephone.

Thus, the actual study population included 77 institutions. Data in Table 1 indicate the original population size by institutional classification and the resulting number of institutions included in this study.

TABLE 1

POPULATION SIZE AND INSTITUTIONAL PARTICIPATION

Institutional Classification	Total Number	Included for Study
Research I	29	25
Research II	32	22
Doctoral Granting I	38	22
Doctoral Granting II	19	8
Totals	118	77

The names of institutions per classification which were included in this study can be found Appendix C.

Each of the funding source and institutional characteristic variables is described below. Those variables most closely associated with gift income were identified and a step-wise multiple regression equation was used to identify those variables most likely to predict the total gift income level.

Institutions located in the top and bottom quartiles, by ranking on the index on total gift income, were identified. The institutions in each of these groups received a fund raising programmatic questionnaire. The data were collected and analyzed using Chi Square tests of independence. The Chi Square statistic was used to determine which differences in the fund raising programs between the top and bottom quartile institutions were statistically significant.

A goal of this study was to identify those variables which were most closely associated with gift income and to ascertain if there were certain variables or areas which can be manipulated to influence gift income. Likewise, it was important to ascertain certain variables which cannot be manipulated but which influence the fund raising efforts of an institution.

Description of Study Variables

In this section a description is given for each of the variables studied.

Gift Income

In this study, an institution's gift income figures for 1982-83, 1983-84, and 1984-85 were extracted from annual reports of the Council for Financial Aid to Education. Three-year gift income figures for each institution were summed and divided by three to produce a three-year average gift income figure.

To account for institutional differences in enrollment, number of alumni, and full-time and part-time students, a gift income index was used. This index was the three-year average gift income for the years 1982-85 divided by the fall 1984 full-time equivalent student enrollment per institution. The full-time equivalent student enrollment figure helped to equate or provide a common denominator or measurement unit for all institutions.

A gift income index was computed for each institution. The full-time equivalent (FTE) figure for each institution was gathered from the 1984 National Center for Education Statistics report. The FTE figure was a composite measurement unit and more accurate than head count totals, because they don't identify part-time individuals. Each institution was ranked from high to low on their total gift income index. This index became the dependent variable for each of the twelve institutional characteristic's which served as independent variables.

Gift Sources

Within the gift income totals of each institution were specific gift source categories. They were: (1) alumni, (2) non-alumni, (3) corporations and businesses, (4) foundations, and (5) other groups and sources. For purposes of this study, the gift income figures for all five donor sources were collected.

Alumni Gifts. The affluence and commitment of an institution's alumni body is reflected in the number of alumni who give and the amount they give. In 1984-85, alumni support accounted for 23.1% of the total voluntary support to higher education. Since an institution's first targeted market for gifts is their alumni body, this variable was examined to identify the specific dollar amount the alumni from each institution gave to their institution.

Non-Alumni Individuals. Given the location of an institution, it's visibility, and perceived importance within a state and surrounding area, non-alumni individuals, or friends as they are called, constitute an important resource for institutions. According to the 1984-85 Council for Financial Aid to Education report, non-alumni individuals accounted for 22.4% of the total voluntary support to higher education. Combined with alumni support, individuals as a group provided slightly less than half, or 45.5% of the total voluntary support. In 1985 Desruisseux reported that in 1983-84, gifts from non-alumni individuals totaled $1.316 billion, a 10.6% increase over the previous year. This donor source, like alumni, is a very important market to attract for philanthropic generosity.

Corporations and Businesses. As reported in the 1984-85 Council for Financial Aid to Education (CFAE) report, corporations and businesses, for the first time ever, gave more than any other donor source. Their 23.8% increase accounted for 24.9% of the total voluntary support or $1.574 billion. According to the 1984-85 CFAE report some of the corporate increases came from an upsurge in corporate products/equipment. This upsurge may have been encouraged by the 1981 Economic Recovery Tax Act (ERTA). The act provided a tax deduction to corporations who donated their company-manufactured items for use in research and training in the biological and physical sciences.

Since research indicated that corporate giving tends to be geographically influenced, and given Pickett's (1977) assumption that resource potential is best measured by the amount of business activity near an institution, this variable was examined to determine how much corporations and businesses gave to each institution in this study.

Foundations. Philanthropic organizations known as foundations are designed to provide support to specially selected organizations and institutions. Usually their financial support is directed toward a specific project or campaign which most public research universities undertake. While there are more than 22,000 private grant making foundations in existence today, the amount of voluntary support from foundations has dropped from a high of 23.9% in 1973 to 18.6% in 1984-85. In spite of this decrease, foundation support to public research and doctoral granting institutions is important, and it was examined here.

Other Groups and Sources. The donor source labeled other groups and sources includes numerous civic and fraternal organizations, auxiliaries, societies, and groups that display their philanthropic generosity by contributing to educational institutions and other non-profit organizations. The Council for Financial Aid to Education identified this donor source, so it was examined as part of the gift source revenues which make up the total gift income figure.

Institutional Characteristic Variables

Since gift income could be influenced by certain institutional characteristics, this study considered such variables. These variables were divided between Financial Resource Variables and Inherent Institutional Variables.

In the 1984-85 Council for Financial Aid to Education survey results, both public and private groups of doctoral granting institutions raised more than a billion dollars each. The twenty private and public colleges and universities reporting the most voluntary support were Harvard University, Stanford University, Columbia University, Cornell University, Yale University, Princeton University, Massachusetts Institute of Technology, University of Illinois, University of Minnesota, University of Pennsylvania, Southern California University, University of California - Los Angeles, University of Wisconsin - Madison, University of Chicago, Johns Hopkins University, Texas A & M University, University of Michigan, Duke University, University of Washington, Washington University. Not included were two systems each comprising multiple units: California, and Texas (p. 7).

Financial Resource Variables

Since voluntary support to both public and private doctoral granting institutions comprised 61.2% of the total amount reported by all institutions, each specific public institutional population was examined closely in this study to determine which factors were associated with gift income levels from each. A description for each of these Financial Resource Variables is given below.

Number of Alumni. The size of an institution's alumni body identifies the potential funding source it has for attracting gifts. However, one must realize that not all alumni feel philanthropic enough to give to their alma mater. Since size of an institution's alumni body could determine it's potential for gifts, this variable was examined for each institution.

Federally Sponsored Research Grants. Federal obligations to research universities for their research and development efforts accounted for $10.1 billion in 1984. This represented one hundred institutions and accounted for 63% of all federal obligations for that year. The leading federal agencies were the Department of Health and Human Services and the Department of Defense. The attraction of sponsored research grants represents a commitment to pursue new knowledge or enhance or refute current knowledge, an understanding that the research undertaken was selected on a meritous basis, and after a perception that only select faculty members from top universities have the ability to attract these grants. Thus, an examination of this factor and its relationship to gift income was deemed important in this study.

Legislative Appropriations. While federal support to education has declined over the years, Glenny (cited in Fields, 1986) acknowledged that the impact wasn't as dramatic as one might think. According to Glenny, the federal government never gave more than 19% of its funds to education, so states have always carried the burden. In addition, state governments have greater flexibility in their ability to raise taxes and to find other sources of revenue for education. Therefore, an examination of state appropriations for higher education could reveal each state's priorities for education.

In 1984-85 the state tax funds for colleges topped $28 billion, a 16% increase in two years. These tax dollars were spent for operating expenses and did not include student fees and federal or local government support. This variable was examined to determine its relationship to an institution's abilities to attract private gift support.

Federal Student Financial Aid Appropriations. While access to public institutions isn't as difficult both financially and academically as it is in several private institutions, many students would not be able to attend college without some type of financial assistance. Federally sponsored financial aid packages provide opportunities to these students. Since the amount of federally sponsored financial aid provides more students with access to college, this variable was examined to determine the amount of federal funds received by an institution and its relationship to the institution's gift income figure.

Inherent Institutional Variables

From both Pickett's (1977) and Leslie's (1979) research, various factors were found to influence or affect fund raising. Those factors included: the type of institution; the size of alumni body; the academic offerings; the number of graduate and professional schools; the volunteer involvement; the market value of the endowment; the age of the institution; the history of philanthropic support; the perceived quality of the institution; and the leadership and involvement of the chief executive officer.

For purposes of this study, the Inherent Institutional Variables were those identified as innate or unique to each institution. A purpose of this study was to determine what relationship each had with the gift income levels of each institution.

Age. The age of an institution was identified by the date of its founding and subtracted from the year 1985. Pickett (1977) used this variable because it reflected not only the longevity of the institution but also the age and size of its alumni body. The assumption was that, with a well established alumni body, there were more opportunities for giving, as well as, that larger gifts are usually received from mature and well-established individuals.

Endowment Market Value. The wealth of an institution is measured by the market value of its endowment, and this variable was utilized in Pickett's 1977 study. An institution's endowment is reflective of the previous support given to the institution and the perceived quality and stability of the institution.

In-State Enrollment. Most public institutions enroll a high percentage of in-state students. This factor was identified because local proximity provides easier access and greater in-state visibility for an institution. Pickett's (1977) study measured this variable by "the percent of the freshmen class" within the state. In the present study, this variable was identified by taking the in-state enrollment percentage figure, as identified in Peterson's (1987) report, and multiplying that percentage figure with the total head count figure. The answer was subtracted from the total enrollment figure to identify the number of in-state students.

Student Enrollment. The size of an institution's student body affects the size of its alumni pool and later its potential for private gift support, so this variable was considered important. Pickett had also included this variable in the 1977 study and it was identified by the total undergraduate and graduate student head count figure.

Cost of Attendance. A student's ability to attend an institution may be reflected in their ability to pay the tuition and fees and room and board costs charged at that institution. While Pickett's (1977) study used a weight cost based on the proportion of the freshman class living on campus, this researcher did not use his formula because the data needed for it was not attainable. Instead projected costs calculated by the College Cost Book were used. These projected costs take into consideration: room and board costs, tuition and fees, books, and general miscellaneous expenses.

Graduate School Attendance. The academic quality of an institution is sometimes measured by the number of graduate and professional program students they enroll. This variable included the total number of graduate students (both full and part-time) enrolled in each institution for the academic year. While Pickett (1977) had identified this variable as a percent of the graduating class attending a graduate school, the variable was not used that way in this study. Pickett's rationale was more applicable to his undergraduate college research and not appropriate to this study.

Number of Institutional Advancement Professionals. Pickett's (1977) research found that the overproductive institutions had a larger number of total institutional advancement professionals. This variable was identified by the researcher as being important for study. Staff size for all institutional advancement efforts (admission, alumni relations, publications and fund raising and its relationship to gift income) was examined.

Educational and General Expenditure (E & G). The size of an institution's budget plus its administrative commitment toward advancement efforts might determine the amount of budget money an advancement program might receive. Therefore, this variable was examined to determine its relationship to an institution's gift income level.

Programmatic Characteristics

Through a review of the literature, several policies or variables associated with an institution's fund raising program were identified. A data gathering instrument was developed to determine the status of various programmatic characteristics of the fund raising program.

Program Components Studied

Programmatic characteristics were categorized into several components which reflected several institutional and program areas of concern. They were:

1. Institutional Component
2. Organizational Component
3. Method Component
4. Emphasis Component

Within each of these program components are several variables which have an opportunity to direct or influence an institution's fund raising efforts. Some of these factors were: the length of time in fund raising, the experience of the staff, the budget, and the areas of program emphasis. An effort was made to develop an instrument for collecting data on all functions of an institutional fund raising program, and to identify all components so they could be independently studied.

Institutional Component. Contained in the institutional component were those factors found in the review of literature that might affect fund raising effectiveness. Leslie (1979) had suggested the following tangible factors which might influence fund raising potential: type of institution, number of graduate and professional schools, the academic offerings, and the institution's location--whether urban or rural, and the section of the country. For this study, this component included: an institution's location, its distinguishable academic programs, its areas of program strength, institutional commitment to fund raising, reasons for giving, and other institutional policies. These variables help to discriminate one institution from another.

Organizational Component. Within any organization is a structure, a staff, a plan, and a budget. Grasty and Skeinkopf (1982) found the responsibilities of development officers and chief administrators to be: the selection of personnel, the coordination of work, the budget recommendations, and the training of paid staff and volunteers. Leslie (1969) found the alignment of at least three of the four main institutional advancement activities to be centralized under one manager. Meyer (1972) found that specific objectives set for specific fund raising programs were important to the program's overall success.

Thus, structures, number of employees, goals, planning documents, budget, and number of years involved in fund raising are all part of the organizational structure. These organizational factors and their relationship to gift income were examined in this study.

Method Component. Programs and fund raising practices associated with soliciting funds are included in the method component.

Pickett (1977) and Webb (1982) found, a development program needs the following programs through which to solicit funds: annual giving, major giving, deferred giving, corporate and foundation giving, and prospect research. Common techniques used to solicit these funds were: direct mail, telephone solicitation, written proposals, and personal solicitations. All these methods and solicitation techniques were examined in this study.

Emphasis Component. The direction and emphasis a fund raising program takes is influenced by the development director, the goals identified, the president, and possibly the trustees. Data were sought on the emphasis placed on the fund raising program during the last three years and the emphasis expected for the next three years as it related to each institution's fund raising program.

Procedures for Data Collection

The collection of data for this study was divided into two parts: (1) the collection of secondary research data on each of 77 institutions regarding all the dependent (gift income) and independent (institutional characteristic) variables, and (2) the collection of data on the fund raising program components for each of the institutions identified in the top and bottom quartile rankings on the total gift income index.

Data Collection on all Variables

A total gift income figure for the three-year period of 1982-83, 1983-84, and 1984-85 and gift income from each donor source were extracted from annual reports of the Council for Financial Aid to Education.

Full-time equivalent data for each institution were extracted from a report generated by the National Center for Education Statistics.

The number of alumni per institution were taken from the 1984-85 Council for Financial Aid to Education report.

The data on federally sponsored research grants were extracted from the 1985 appropriate National Science Foundation report.

Information on each state's Legislative appropriations were taken from a report completed by Chambers (1985).

Information on the amount of federal student financial aid assistance per institution was collected from appropriate reports published by the U.S. Department of Education.

The founding date of each institution was found in Peterson's (1987) Annual Guides/Undergraduate Studies, as were data relevant to in-state enrollment and both head count and full-time equivalent enrollments, both graduate and undergraduate.

Data on endowment market value were obtained from the most recent 1984-85 Council for Financial Aid to Education report.

A composite figure for cost of attendance at each institution was collected from the 1986 The College Cost handbook. This handbook identified the composite cost to include room and board, tuition and fees, and miscellaneous expenses.

The number of institutional advancement professionals at each institution was found in the 1986 Membership Directory published by the Council for Advancement and Support of Education (CASE). All individuals listed in the directory per institution were counted to identify the number of professional advancement staff.

The data on educational and general expenditures (E & G) were collected from the National Center for Education Statistics report.

A summary table identifying secondary resource data collected can be found in Appendix D.

Programmatic Characteristics

A gift income index ranking of the 77 institutions identified from high to low on the gift income index was completed. Those institutions located within the top and bottom quartiles (20 institutions per Group) were identified. The listing of those institutions by Carnegie classification can be seen in Table 2.

TABLE 2

INSTITUTIONS BY QUARTILE RANKING AND INSTITUTIONAL CLASSIFICATION[a]

Top Quartile		Bottom Quartile	
Institution	Classification	Institution	Classification
U of Virginia	RII	E. Texas State	DGII
U of Illinois-(URB)	RI	N. Texas State	DGI
U of Florida	RI	U of S. Mississippi	DGI
U of Cal.-Los. Ang.	RI	SUNY at Albany	DGII
U of Michigan	RI	Indiana State	DGII
Texas A & M	RI	Memphis State	DGII
U of Georgia	RI	SUNY-Binghampton	DGI
U of Washington	RI	S. Illion. U-Carb.	DGI
U of Wisconsin-Mads.	RI	Georgia State	DGI
U of Minnesota	RI	Bowling Green	DGII
U of Cal.-San Diego	RI	U of Wisc.-Milw.	DGI
U of Cal.-Berkeley	RI	U of Toledo	DGI
U of Missouri-(Col.)	RI	SUNY-Stony Brook	RII
U of Colorado	RI	U of Akron	DGII
Oregon State	RI	U of Cal.-Santa B.	DGI
U of Nebraska	RII	Ball State	DGI
Auburn U.	RII	Kent State	DGI
U of Cal.-Irvine	RII	U of S. Dakota	DGII
U of Arizona	RI	U of New Hampshire	DGI
U of Houston	DGI	Colorado State	RI
Totals	20	Total	20

[a] RI = Research I; RII = Research II; DGI = Doctoral Granting I; DGII = Doctoral Granting II.

The names and addresses of the individual responsible for fund raising at each institution were identified from the 1986 Membership Directory published by the Council for the Advancement and Support of Education.

The fund raising program questionnaire was mailed to all forty institutions. The questionnaire was accompanied by a cover letter explaining the nature of the study, the requested return date, and a self-addressed stamped envelope (See Appendix E and F). The first mailing was on February 2, 1987, and the requested return date was February 16, 1987. By February 20th, nineteen questionnaires had been received. An examination of the responses showed eleven out of twenty returns from the bottom quartile institutions and only eight out of twenty from the top quartile institutions.

Follow up telephone calls to each nonresponding institution began on February 23, 1987 and were completed on February 24, 1987. Between February 23 and March 2, eleven additional responses were received. Seven additional bottom quartile responses were received. Four additional responses were received from the top quartile institutions for a total of twelve responses from this group. On Monday, March 2, 1987 additional follow-up telephone calls were made to the nonresponding institutions. On that day, four questionnaires were mailed by federal express to the appropriate institutions. A request was made by the researcher to have all the questionnaires returned by March 7, 1987. During that week, one institution which had been contacted by telephone three previous times wrote a letter to decline participation in the study. The investigator's deadline date for collecting the questionnaires and computing the data from the responses was March 9, 1987. The time line and response rate for the collection of data for the questionnaire can be seen in Table 3.

TABLE 3

INSTITUTIONAL SURVEY RESPONSE RATE

Study Groups	Total	Responses by Feb. 20	Responses by March 2	Responses by March 9	Total Response Percentages
Top Quartile	20	8	12	14	70
Bottom Quartile	20	11	18	18	90
Totals	40	19	30	32	80

The investigator felt that adequate measures had been taken to ensure a high response rate, so no further follow up was conducted after March 6, 1987.

Methods of Data Analysis

The data from the collection of resource information on all the dependent and independent variables were ranked ordered from high to low. The Spearman rank-difference method of correlation (rho) was used to determine those variables most closely associated with total gift income.

A multiple regression equation was developed to identify those variables most likely to predict gift income. Likewise, a regression equation was developed for all gift source analyses and institutional characteristic analyses for each hypothesis tested.

Nominal data were received by questionnaire from institutions in the top and bottom quartiles on the total gift income index. Frequencies and percents were employed to identify typical responses from each group (top to bottom). The Chi Square test for independence was used to determine if differences relating to fund raising programs were statistically significant.

Chapter IV

PRESENTATION OF DATA ON GIFT INCOME FOR ALL INSTITUTIONS

This chapter contains the results of the data analyses undertaken to test three sets of hypotheses about gift income levels. Those were related to: (1) financial and inherent institutional variables, (2) institutions by Carnegie classification, and (3) geographical regions of the country. Results were obtained by using the Spearman-rank difference method of correlation (rho). The rank order coefficients of correlation between the total gift income index and each of the five gift income sources and the twelve institutional characteristic variables were calculated. Finally a step-wise multiple regression equation was developed to identify those variables most likely to predict the total gift income index.

The list of variables and the units of measure for all the variables are presented in Appendix G. Understanding the units of measurement is necessary when examining the meaning of the multiple regression equation.

A significance level of $p \leq .05$ was required to reject the null hypothesis of no relationship. A probability of $p \leq .05$ or less was considered "significant", and a probability of $p \leq .01$ or less was considered "very significant."

The description of strength of relationship (r) is identified by a guideline set forth by Guilford (1950). This guideline is found in Appendix H.

Sources of Income

Relationships of the total gift income index with each of the five gift income sources are presented in this section. The Spearman-rank difference method of correlation (rho) was used to determine the relationship of these variables.

The sample size for this analysis was 77. Since the gift income sources - alumni, non alumni, corporate, foundation, and other - are components of the total gift income index, there was an assumption that all the variables would be significant at the $p \leq .05$ level of significance and highly correlated. The findings indicate that the relationship between each gift income source and the total gift income index was very significant, $p \leq .05$.

The results of the Spearman-rank difference method of correlation (rho) for all the public research and doctoral granting institutions (N = 77) showed that gifts from corporations and businesses have a very high degree of relationship to the total gift income index ($r = .91$). Foundation gifts had a high degree of relationship ($r = .84$), along with gifts from non-alumni and others, ($r = .74$) and ($r = .71$) respectively. Alumni support was only moderately correlated to the total gift income index, (r = .64). As a result of this analysis, it might be concluded that corporate and foundation support are very important sources to consider for private gift support.

Financial and Inherent Institutional Characteristics for All Institutions

The analysis of the two sets of variables - financial resources and inherent institutional characteristics - are examined in this section for their relationship to gift income. Each are examined separately.

Financial Resources. An hypothesis for this study was that there was no significant relationship between gift income and the financial resource variables of: (1) number of alumni, (2) federally sponsored research grants, (3) state legislative appropriations, and (4) student financial aid appropriations. To test these hypotheses, the Spearman-rank difference method of correlation (rho) was used for all seventy-seven institutions.

The findings indicated that all the variables were significantly related ($p \leq .05$) to the total gift income index. Thus, the null hypothesis of no relationship was rejected.

The results of the rank order correlation (rho) revealed that federal research and development (FEDRD) support had the highest degree of correlation with the total gift income index (r = .71).

The student financial aid (STFA) variable was least related to the total gift income index ($r = .31$) Coefficients of correlation between the total gift income index and number of alumni (NA) and amount of legislative appropriations (LEGAPP) were ($r = .61$) and ($r = .55$), respectively, a moderate level of correlation indicating a substantial relationship existed.

A stepwise multiple regression analysis was performed on the data with the total gift income index as the dependent variable and the financial resource variables as the independent variables. The most predictive regression equation was:

$$\text{Gift Income Index} = 244.165077 + .006676\ \text{FEDRD} + 8.89357 \times 10^{-7}\ \text{LEGAPP}$$

The multiple coefficient of correlation ($r = .71$) was statistically significant at the .05 level. This means the probability is that only one time in twenty would a coefficient of correlation of this size exist due to chance if there was no true relationship. The coefficient of multiple determination (R^2) reveals the proportion of the variance in the total gift income dollar index that is predicted by the combined relationship of the federal research and development dollar index and the dollar index of legislative appropriations. In this case, one can say that 51.05% of the variance in the total gift income index is accounted for by the two independent variables taken together, eliminating from double consideration things they have in common.

The remaining percentage of the variance, which is 48.95% (1 - R^2), is still to be accounted for. This remainder is sometimes given the symbol K^2 and is known as the coefficient of multiple nondetermination. The coefficient of forecasting efficiency ($E = 1 - \sqrt{1 - R^2}$) was found to be 30%. This type of explanation is appropriate to all other multiple regression formulas to be presented but appears only here.

An explanation of the coefficients found in this regression equation are identified below. In Appendix I, a generalized regression equation has been identified which will explain the coefficients in future regression equations.

1. For every $1,000 increase in federal research and development money, the total gift income index should increase $6.6676, provided all other variables are held constant.
2. For every $1 million of increase in legislative appropriations, the total gift income index should increase by $.8893.

The standard error of estimate for the equation was $328.04. This means that with knowledge of dollar indices for federal research and development and legislative appropriations, this formula would predict gift income which, on a propability basis of two to one, should fall within a range of plus or minus $328.04 from the predicted gift income index amount. The standard error of estimate (SEE) is the standard deviation of the actual Y values (the dependent variable) from the predicted Y' values. Thus, it is used to determine the amount of prediction error associated with the predictions. The standard error of estimate is obtained from all computer printouts with regression analysis. If it is assumed that actual Y values are normally distributed about the regression line, the researcher would be able to estimate the proportion of cases that fall between ± 1 standard error of estimate units from the predicted values or ± 2 standard error of estimate units from the predicted values. If the value of R^2 is high, then the standard error of estimate number would be small. Conversely, if the R^2 value is low, the standard error of estimate value would be high. Likewise, the higher the R^2 value, the higher is the forecasting efficiency of the regression equation.

As a result of this step-wise regression equation analysis, one could conclude that the amount of federal research and development monies and legislative appropriations are important to institutions of higher education seeking gift income.

Inherent Institutional Characteristic Variables. An hypothesis for this study was that there was no significant relationship between gift income and the inherent institutional variables of: (1) age, (2) endowment market value, (3) in-state enrollment, (4) head count enrollment, (5) cost of attendance, (6) number of graduate students, (7) number of advancement professionals, and

(8) educational and general expenditures. To test this hypothesis, the Spearman-rank difference method of correlation (rho) was used for all seventy-seven institutions.

Because of the high correlation with in-state enrollment and total student enrollment, total enrollment was eliminated from all multiple regression equations in this study because of this relationship.

The findings indicate that relationships between each of the institutional characteristic variables and the total gift income index were very significant $p \leq .05$. Thus, the null hypothesis of no relationship was rejected. Findings are illustrated in Table 4. The results of the correlation (rho) revealed that educational and general expenditure (EGEXP) and endowment market value (EMV) have a high degree of correlation to the total gift income index ($r = .74$) and ($r = .72$), respectively. The cost of attendance variable showed the least degree of correlation to the total gift income index, ($r = .25$).

A step-wise multiple regression analysis was made with the total gift income index as the dependent variable and each of the inherent institutional characteristic variables as the independent variables. The resulting regression equation for this analysis was:

$$\text{Gift Income Index} = 250.975 + 1.3949 \times 10^{-6}\ \text{EGEXP} + 2.5469 \times 10^{-6}\ \text{EMV}$$

TABLE 4

COEFFICIENTS OF CORRELATION BETWEEN TOTAL GIFT INCOME INDEX (TGII) AND INHERENT INSTITUTIONAL CHARACTERISTICS (N = 77)

Inherent Institutional Characteristics	r with TGII	Inherent Institutional Characteristics	r with TGII
Age	.3431*	Cost	.2553*
Endowment Market Value	.7244*	No. of Grad Students	.4620*
In-state Enrollment	.3949*	No. of Advancement Professionals	.4972*
Head Count Enrollment	.4606*	Educational and General Expend.	.7481*

* Denotes significance at the .05 level.

The multiple coefficient of correlation (r = .72) was statistically significant at the .05 level. The coefficient of multiple determination, R^2 was .5206, which revealed the proportion of the variance in the total gift income dollar index which was accounted for by the combined relationship of the educational and general expenditure dollar index and the endowment market value dollar index. The forecast efficiency of this formula was found to be 30.77%. The standard error of estimate was found to be $324.66. As a result of this analysis, one can conclude that educational and general expenditures and endowment market value are important in the prediction of the total gift income index.

Total Gift Income with All Independent Variables

A step-wise multiple regression equation was developed from the data with the total gift income index as the dependent variable and all twelve of the institutional characteristics as independent variables. The most predictive equation from this analysis was:

$$\text{Gift Income Index} = 284.6507 + .005203\ \text{FEDRD} + 2.58818 \times 10^{-6}\ \text{EMV}$$

The multiple coefficient of correlation ($r = .75$) was statistically significant at the .05 level. The coefficient of multiple determination R^2 was .5662, which revealed the proportion of variance in the total gift income dollar index which was accounted for by the federal research and development dollar index and the endowment market value dollar index. The forecast efficiency of this formula was found to be 34.14%. The standard error of estimate was $308.81.

As a result of this analysis, one could conclude that federal research and development support is important to an institution's ability or perceived research quality for attracting private gift support. Additionally, the size of an institution's endowment market value is also important to an institution's ability to attract private gift support. Thus, these two variables in combination are important to all seventy-seven of the public research and doctoral granting institutions.

Total Gift Income Index without Federal Research and Development with all Independent Variables

Because of the impact of the federal research and development variable on the prediction of gift income for the seventy-seven institutions, a decision was made to develop a step-wise regression equation without the federal research and development variable to examine if additional variable(s) would be identified. The resulting regression equation was:

$$\text{Gift Income Index} = 250.9751 + 1.39494 \times 10^{-6}\ \text{EGEXPENS} + 2.54689 \times 10^{-6}\ \text{EMV}$$

The multiple coefficient of correlation ($r = .72$) was statistically significant at the .05 level. The coefficient of multiple determination R^2 was .5206, which revealed the proportion of variance in the total gift income dollar index which was accounted for by the educational and general expenditure dollar index and the endowment market value dollar index. The forecast efficiency of this formula was found to be 30.76%. The standard error of estimate was $324.66. When the influence of the federal research and development variable was eliminated, the results of the analysis resembled the results found for just the inherent institutional variables.

Class of Institution

This section contains the results of the data analysis undertaken to test the hypothesis that there was no significant relationship between and across Carnegie classification of institutions and gift income. The types or classes of institutions were: Research (RI), Research II (RII), Doctoral Granting I (DGI) and Doctoral Granting II (DGII). Each class group of institutions was examined separately.

To test this hypothesis, the Spearman-rank difference method of correlation (rho) was used for each class of institution to determine those variables most closely associated with the total gift income index. A step-wise multiple regression equation was used to identify those variables most likely to predict the total gift income index for each class of institution.

Gift Income for Universities by Carnegie Type

Research I Institutions (RI). The findings from the rank order correlation (rho) for the total gift income index with the gift source variables revealed that all the gift sources were significant to the total gift income index, $p \leq .05$. The results of the rank order correlation (rho) analysis for all the institutional variables (financial and inherent institutional) and the total gift income index revealed that four variables were statistically significant at the .05 level. The significant variables are: federal research and development (FEDRD), legislative appropriations (LEGAPP), the number of graduate students (NGRADS) and the educational and general expenditures (EGEXPENS). Thus, the null hypothesis of no relationship was rejected for these four variables. Table 5 illustrates the findings.

From these findings, one could conclude that Research I institutions place a heavy emphasis on research and as such they attract more legislative appropriations; they attract and need more graduate students, thus, their educational and general expenditures are larger.

The results of the step-wise multiple regression analysis of relationships between the total gift income index and each of the institutional characteristic variables for RI institutions resulted in the following equation:

$$\text{Gift Income Index} = 379.713698 + 1.58145 \times 10^{-6}\ \text{LEGAPP} + .003941\ \text{FEDRD}$$

The multiple coefficient of correlation ($r = .63$) was statistically significant at the .05 level. The coefficient of multiple determination, R^2 was .3911, which revealed the proportion of the variance in the total gift income dollar index which was accounted for by the combined relationship of the legislative appropriations dollar index and the federal research and development dollar index. The forecast efficiency of this formula was found to be 21.97%. The standard error of estimate was $355.97.

TABLE 5

COEFFICIENTS OF CORRELATION BETWEEN TOTAL GIFT INCOME INDEX (TGII) AND ALL INSTITUTIONAL VARIABLES FOR RI INSTITUTIONS (N = 25)

Institutional Characteristics	r with TGII	Institutional Characteristics	r with TGII
Financial			
1. No. of Alums	.2831	3. In-State Enrollment	.2877
2. Fed. Research and Development	.4585*	4. Head Count Enrollment	.2092
3. Legislative Appropriations	.5131*	5. Cost	.0500
4. Student Financial Aid	.0915	6. No. of Grad Students	.4300*
Inherent			
1. Age	.2286	7. No. of Advancement Professional	.2639
2. Endowment Market Value	.3231	8. Educational and General Exp.	.3392*

* Denotes significance at the .05 level.

Research II Institutions (RII). The findings from the rank order correlation (rho) for the total gift income index with the gift source variables revealed that all gift sources except other groups and sources were statistically significant at the .05 level.

The results of the rank order correlation (rho) between all the institutional characteristic variables and the total gift income index revealed that only three variables were significant. All variables and the correlation coefficients can be seen in Table 6. Those variables which were significant are: (1) age of the institution (AGE), (2) endowment market value (EMV), and (3) educational and general expenditures (EGEXPENS). Thus, the null hypothesis of no relationship was rejected for these institutional characteristic variables and accepted for the others.

The results of the step-wise multiple regression analysis of relationships between the total gift income index and each of the institutional characteristic variables for RII institutions resulted in the following regression equation:

$$\text{Gift Income Index} = 420.3426 + 4.63827 \times 10^{-6}\ \text{EMV}$$

The multiple coefficient of correlation ($r = .80$) was statistically significant at the .05 level. The coefficient of multiple determination, R^2, was .6376, which revealed the proportion of the variance in the total gift income dollar index which was accounted for by the endowment market value dollar index. The forecast efficiency of this formula was 39.18%. The standard error of estimate was $244.06.

Doctoral-Granting I Institutions (DGI). The findings from the rank order correlation (rho) for the total gift income index with each of the gift source variables revealed that all variables

TABLE 6
COEFFICIENTS OF CORRELATION BETWEEN TOTAL GIFT INCOME INDEX (TGII) AND ALL INSTITUTIONAL VARIABLES FOR RII INSTITUTIONS (N = 22)

Institutional Characteristics	r with TGII	Institutional Characteristics	r with TGII
Financial			
1. No. of Alums	.2411	3. In-State Enrollment	-.1925
2. Fed. Research and Development	-.1022	4. Head Count Enrollment	-.0623
3. Legislative Appropriations	.0469	5. Cost	.0040
4. Student Financial Aid	-.2953	6. No. of Grad Students	-.0830
Inherent			
1. Age	.3167*	7. No. of Advancement Professional	-.0845
2. Endowment Market Value	.6296*	8. Educational and General Exp.	.4015*

*Denotes significance at the .05 level.

were statistically significant, at the .05 level. The corporate and foundation variables showed a very high degree of correlation with the total gift income index (r = .90).

The results of the rank order correlation (rho) with each of the institutional variables and the total gift income index revealed only three variables as significant. The significant variables were: (1) endowment market value (EMV), (2) the number of advancement professionals (NADV), and (3) the educational and general expenditures (EGEXPENS). Thus, the null hypothesis of no relationship was rejected for these three variables and accepted for the others. There was a high degree of correlation between the endowment market value variable and the total gift income index ($r = .77$). Findings are illustrated in Table 7.

The results of the step-wise multiple regression analysis of relationship between the total gift income index and each of the institutional characteristic variables for DGI institutions resulted in the following equation:

$$\text{Gift Income Index} = -50.5618 + 7.86470 \times 10^{-6}\ \text{EMV} + 2.43303 \times 10^{-6}\ \text{EGEXPENS}$$

The multiple coefficient of correlation ($r = .78$) was statistically significant at the .05 level. The coefficient of multiple determination, R^2, was .6049, which revealed the proportion of the variance in the total gift income dollar index which was accounted for by the combined relationship of the endowment market value dollar index and the educational and general expenditure dollar index. The forecast efficiency of this formula was 37.15%. The standard error of the estimate was $155.96.

TABLE 7
COEFFICIENTS OF CORRELATION BETWEEN TOTAL GIFT INCOME INDEX (TGII) AND ALL INSTITUTIONAL VARIABLES FOR DGI INSTITUTIONS (N = 22)

Institutional Characteristics	r with TGII	Institutional Characteristics	r with TGII
Financial			
1. No. of Alums	.0728	3. In-State Enrollment	-.1711
2. Fed. Research and Development	.2558	4. Head Count Enrollment	-.1248
3. Legislative Appropriations	.2558	5. Cost	.1717
4. Student Financial Aid	.1880	6. No. of Grad Students	-.0859
Inherent			
1. Age	.1875	7. No. of Advancement Professional	.4397*
2. Endowment Market Value	.7696*	8. Educational and General Exp.	.4918*

*Denotes significance at the .05 level.

Doctoral-Granting II Institutions. The results of the rank order correlation (rho) for the total gift income index with the gift sources revealed all variables except other groups and sources as significant at the .05 level. The correlation coefficient for the other groups and sources was (r = .36). This variable--other groups and sources--was also not significant in the RII institutions ($r = .096$).

The results of the rank order correlation (rho) with all the institutional characteristic variables and the total gift income index revealed only one variable--endowment market value--as significant. Thus, the null hypothesis of no relationship was rejected for only this variable. All variables and the correlation coefficients can be seen in Table 8.

The results of the step-wise multiple regression equation for the total gift income index and all the institutional characteristic variables for DGII institutions resulted in:

Gift Income Index = $22.2377 + 2.40318 \times 10^{-5}$ EMV

The multiple coefficient of correlation ($r = .73$) was statistically significant at the .05 level. The coefficient of multiple determination, R^2, was .5312, which revealed the proportion of the variance in the total gift income dollar index which accounted for the endowment market value dollar index. The forecast efficiency of this formula was 31.54%. The standard error of the estimate was $96.23.

TABLE 8
COEFFICIENTS OF CORRELATION BETWEEN TOTAL GIFT INCOME INDEX (TGII) AND ALL INSTITUTIONAL VARIABLES FOR DGII INSTITUTIONS (N = 8)

Institutional Characteristics	r with TGII	Institutional Characteristics	r with TGII
Financial			
1. No. of Alums	.1667	3. In-State Enrollment	-.0476
2. Fed. Research and Development	-.1078	4. Head Count Enrollment	-.0476
3. Legislative Appropriations	-.3095	5. Cost	.0476
4. Student Financial Aid	-.0952	6. No. of Grad Students	-.3810
Inherent			
1. Age	.2857	7. No. of Advancement Professional	.3353
2. Endowment Market Value	.7361*	8. Educational and General Exp.	.1667

*Denotes significance at the .05 level.

Located in Appendix J and K is an example of a regression equation computed for Auburn University. This example can be used to hand compute a regression equation for any institution if one or two variables are known.

Geographical Regions of Institution Location

This section contains the results of the data analysis undertaken to test the hypothesis that there will be no significant difference in the total gift income index among institutions located in different regions of the country. The regions of the country were: (1) East-25, (2) Mid-west-17, (3) Southeast-10, (4) Southwest-9, and (5) West-16. Total gift income was examined separately for institutions in each section of the country.

To test this hypothesis the Spearman-rank difference method of correlation (rho) was used for institutions in each region to determine those variables most closely associated with the total gift income index.

A step-wise multiple regression equation was used to identify those variables most likely to predict the gift income index for each region of country.

East (E)

The findings from the rank order correlation (rho) for the total gift income index and the gift source variables revealed all variables to be very significant at the .05 level.

The results of the rank order correlation (rho) with all the institutional characteristic variables and the total gift income index revealed all variables to be very significant at the .05 level. Thus, the null hypothesis of no relationship was rejected for all these variables. The results revealed that the endowment

TABLE 9
COEFFICIENTS OF CORRELATION BETWEEN TOTAL GIFT INCOME INDEX (TGII) AND ALL INSTITUTIONAL VARIABLES FOR EASTERN INSTITUTIONS (N = 25)

Institutional Characteristics	r with TGII	Institutional Characteristics	r with TGII
Financial			
1. No. of Alums	.6185*	3. In-State Enrollment	.4008*
2. Fed. Research and Development	.6946*	4. Head Count Enrollment	.4946*
3. Legislative Appropriations	.4269*	5. Cost	.6700*
4. Student Financial Aid	.4554*	6. No. of Grad Students	.4770*
Inherent			
1. Age	.5596*	7. No. of Advancement Professional	.5820*
2. Endowment Market Value	.8146*	8. Educational and General Exp.	.6831*

*Denotes significance at the .05 level.

market value variable had a high degree of correlation to the total gift income index (r = .82). Table 9 identifies the variables and the coefficient of correlations.

The results of the step-wise multiple regression equation with the total gift income index and all the institutional characteristic variables for Eastern institutions resulted in the following equation:

Gift Income Index = -51.9543 + .006318 FEDRD + 2.145281 AGE

The multiple coefficient of correlation ($r = .84$) was statistically significant at the .05 level. The coefficient of multiple determination, R^2, was .7091, which revealed the proportion of the variance in the total gift income dollar index which was accounted for by the federal research and development dollar index and the age index. The forecast efficiency of this formula was found to be 46.07%. The standard error of estimate was $181.78.

Midwest (MW)

The findings from the rank order correlation (rho) for the total gift income index and the gift source variables revealed all variables to be very significant at the .05 level. The corporate and foundation variables were very highly correlated with the total gift income index ($r = .91$) and ($r = .90$), respectively.

The results of the rank order correlation (rho) with all the institutional characteristic and the total gift income index revealed that all variables were significant except the student financial aid variable and the cost of attendance variable. Thus, the null hypothesis of no relationship was rejected for all but these variables. The variables which were highly correlated to the total gift income index were number of alumni and cost of

TABLE 10
COEFFICIENTS OF CORRELATION BETWEEN TOTAL GIFT INCOME INDEX (TGII) AND ALL INSTITUTIONAL VARIABLES FOR MW INSTITUTIONS (N = 17)

Institutional Characteristics	r with TGII	Institutional Characteristics	r with TGII
Financial			
1. No. of Alums	.8995*	3. In-State Enrollment	.5123*
2. Fed. Research and Development	.5588*	4. Head Count Enrollment	.5074*
3. Legislative Appropriations	.5592*	5. Cost	.4071
4. Student Financial Aid	.3407	6. No. of Grad Students	.5147*
Inherent			
1. Age	.4920*	7. No. of Advancement Professional	.4816*
2. Endowment Market Value	.8431*	8. Educational and General Exp.	.7941*

*Denotes significance at the .05 level.

attendance (r = .90) and (r = .84), respectively. All variables and the correlation coefficients can be seen in Table 10.

The results of the step-wise multiple regression equation with the total gift income index and all the institutional characteristic variables for MW institutions resulted in the following equation:

Gift Income Index = -64.3457 + .00548 Alumni

The multiple coefficient of correlation ($r = .91$) was statistically significant at the .05 level. The coefficient of multiple determination, R^2, was .8224, which revealed the proportion of the variance in the total gift income dollar index which was accounted for the alumni dollar per number of alumni index. The forecast efficiency of this formula was found to be 57.86%. The standard error of estimate was $212.22.

Southeast (SE)

The results of the rank order correlation (rho) for the total gift income index and the gift source variables revealed all variables significant except the non-alumni variable. In this analysis, the corporate variable was very highly correlated to the total gift income index ($r = .90$).

The findings from the rank order correlation (rho) with all the institutional characteristic variables and the total gift income index revealed four variables not significant. Those variables were: (1) student financial aid, (2) in-state enrollment, (3) head count enrollment, and (4) the number of advancement professionals. Thus, the null hypothesis of no relationship was rejected for the other eight variables and accepted for these four variables. Table 11 identifies the variables and the coefficients of correlations.

TABLE 11
COEFFICIENTS OF CORRELATION BETWEEN TOTAL GIFT INCOME INDEX (TGII) AND ALL INSTITUTIONAL VARIABLES FOR SE INSTITUTIONS (N = 10)

Institutional Characteristics	r with TGII	Institutional Characteristics	r with TGII
Financial			
1. No. of Alums	.5758*	3. In-State Enrollment	.2364
2. Fed. Research and Development	.8788*	4. Head Count Enrollment	.3091
3. Legislative Appropriations	.7576*	5. Cost	.8909*
4. Student Financial Aid	.2000	6. No. of Grad Students	.2970
Inherent			
1. Age	.5758*	7. No. of Advancement Professional	.5706*
2. Endowment Market Value	.8424*	8. Educational and General Exp.	.5714*

*Denotes significance at the .05 level.

The results of the step-wise multiple regression equation with the total gift income index and all the institutional characteristic variables for SE institutions resulted in the following equation:

$$\text{Gift Income Index} = 153.0153 + .015112\ \text{FEDRD} + 4.59094 \times 10^{-6}\ \text{EMV}$$

The multiple coefficient of correlation ($r = .95$) was statistically significant at the .05 level. The coefficient of multiple determination, R^2, was .9029, which revealed the proportion of variance in the total gift income dollar index which was accounted for by the federal research and development dollar index and the endowment market value dollar index. The forecast efficiency of this formula was 68.84%. The standard error of the estimate was $220.40.

Southwest (SW)

The findings from the rank correlation (rho) for the total gift income index and the gift source variables revealed that all variables were significant. The corporate and foundation variables were very highly correlated to the total gift income index ($r = .93$) and ($r = .88$), respectively.

The results of the rank order correlation (rho) with all the institutional characteristic variables and the total gift income index variable revealed that three variables were not significant. Those variables were: (1) age of the institution, (2) cost of attendance, and (3) number of advancement professionals. Thus, the null hypothesis of no relationship was accepted for these three variables and rejected for the other nine significant variables. The legislative appropriations variable showed the

TABLE 12
COEFFICIENTS OF CORRELATION BETWEEN TOTAL GIFT INCOME INDEX (TGII) AND ALL INSTITUTIONAL VARIABLES FOR SW INSTITUTIONS (N = 9)

Institutional Characteristics	r with TGII	Institutional Characteristics	r with TGII
Financial			
1. No. of Alums	.6333*	3. In-State Enrollment	.7500*
2. Fed. Research and Development	.6667*	4. Head Count Enrollment	.7333*
3. Legislative Appropriations	.9333*	5. Cost	.3167*
4. Student Financial Aid	.1167*	6. No. of Grad Students	.6167*
Inherent			
1. Age	.4811	7. No. of Advancement Professional	.5500
2. Endowment Market Value	.8000*	8. Educational and General Exp.	.8667*

*Denotes significance at the .05 level.

highest degree of correlation with the total gift income index (r = .93). Table 12 identifies the variables and coefficient of correlations.

The results of the step-wise multiple regression equation with the total gift income and all the institutional characteristic variables for SW institutions resulted in the following equation:

$$\text{Gift Income} = -117.7625 + 5.60443 \times 10^{-6}\ \text{LEGAPP}$$

The multiple coefficient of correlation ($r = .94$) was statistically significant at the .05 level. The coefficient of multiple determination, R^2, was .8775, which revealed the proportion of variance in the total gift income dollar index which was accounted for by the legislative appropriations dollar index. The forecast efficiency of this formula was found to be 65%. The standard error of the estimate was $172.37.

West (W)

The results of the rank order correlation (rho) for the total gift income index and the gift source variables revealed that all variables were significant. The corporate and foundation variables showed a very high degree of correlation to the total gift income index, ($r = .86$) and ($r = .84$), respectively.

The findings from the rank order correlation (rho) with all the institutional characteristic variables and the total gift income index revealed all variables significant except four: (1) legislative appropriations, (2) age of the institution, (3) endowment market value, and (4) cost of attendance. Thus, the

TABLE 13
COEFFICIENTS OF CORRELATION BETWEEN TOTAL GIFT INCOME INDEX (TGII) AND ALL INSTITUTIONAL VARIABLES FOR W INSTITUTIONS (N = 16)

Institutional Characteristics	r with TGII	Institutional Characteristics	r with TGII
Financial			
1. No. of Alums	.5235*	3. In-State Enrollment	.4765*
2. Fed. Research and Development	.7912*	4. Head Count Enrollment	.5059*
3. Legislative Appropriations	.3324	5. Cost	.2500
4. Student Financial Aid	.5324*	6. No. of Grad Students	.6559*
Inherent			
1. Age	.1075	7. No. of Advancement Professional	.4867*
2. Endowment Market Value	.4029	8. Educational and General Exp.	.7235*

*Denotes significance $p \leq .05$

null hypothesis of no relationship was accepted for these four variables and rejected for the other eight significant variables. Table 13 identifies the variables and the coefficient of correlations.

The results of the step-wise multiple regression equation with the total gift income index and all the institutional characteristic variables for W institutions revealed the following equation:

Gift Income Index = 302.1061 + .007336 FEDRD

The multiple coefficient of correlation ($r = .87$) was statistically significant at the .05 level. The coefficient of mulitple determination, R^2, was .7590, which revealed the proportion of variance in the total gift income dollar index which was accounted for by the federal research and development dollar index. The forecast efficiency of this formula was found to be 50.91%. The standard error of the estimate was $226.49.

Summary of Findings

In support of findings gleaned from the review of literature, corporate and foundation gifts do have a high degree of relationship to the gift income levels of institutions. The impact of federal research and development support and legislative appropriations is also an important consideration when examining variables which are important to the predictive values of the total gift income index for these public research and doctoral granting institutions.

In conjunction with the importance of effective fund-raising programs in institutions, is the value placed on good stewardship of gifts and the investment policies of an institution. Since endowment market value was a variable which did reveal involvement in many of the correlation and multiple regression equations in this study, it is important for institutions to invest wisely and to communicate to their constituencies on the stewardship of their gifts. Located in Appendix L is a composite table identifying all correlation coefficients for all gift income sources. In Appendix M is a composite table of all correlation coefficients for all institutional variables. Identified in Appendix N is a composite table for all multiple regression equations.

Chapter V

PRESENTATION AND ANALYSIS OF GIFT INCOME AND FUND RAISING PROGRAM CHARACTERISTICS FOR THE TOP AND BOTTOM INSTITUTIONS

This chapter contains the results of the data analysis undertaken to test the hypothesis related to the top and bottom ranked institutions on: (1) gift income variables, (2) institutional variables, and (3) fund raising practices.

Presented in the gift income section are the results obtained by the Spearman-rank difference method of correlation rho. The rank order correlations between the total gift income index and each of the five gift income sources and the twelve institutional characteristic variables are presented. A step-wise multiple regression equation was developed to identify those variables most likely to predict the gift income index for the top and bottom ranked institutions.

Descriptive findings related to the proportion of total dollars received (not gift income index) from each gift income source are described for each institutional ranking.

Presented in the fund raising program section are the results from Chi-square tests of independence to determine if differences in the fund raising program practices between the top and bottom institutions were statistically significant.

In some instances frequency of response and percentages were presented for nominal data. This section of the study was divided into the four fund raising program components gathered from the review of the literature. Each factor or variable associated with each component is identified below:

1. Institutional Component

Factors were: location, academic programs and strengths, alumni chapters, athletic teams, institutional committment to fund raising, reasons for giving, fund raising, fund raising counsel, communication efforts, and other institutional policies.

2. Organizational Component

Factors were: years in fund raising, structure, professional staff, support staff, terms of service, priorities, goals, budgets, dollars expended and chief development years.

3. Method Component

Factors were: (1) fund raising programs (annual giving, major gifts, deferred gifts, corporate gifts, foundation gifts, and capital campaigns, and (2) solicitation techniques (direct mail, telephone, written proposals, and personal solicitations).

4. Emphasis Component

Factors were: emphasis placed on certain fund raising program areas.

Characteristics of the Institutional Rankings and the Respondents

Twenty universities were in each of the top and bottom quartiles of the total gift income distribution. The three year average gift income figures (not gift income index) for the top institutions ranged from a three year average high at the University of Minnesota of $58,742,799 to a low of $10,708,671 at the University of California, Irvine. Full-time equivalent enrollment totals ranged from a high of 47,387 at the University of Minnesota to a low at the University of California, Irvine of 11,406.

The three-year average gift income figures for the institutions in the bottom quartile ranged from a three year average high at Colorado State University of $4,977,106 to a low at East Texas State University of $416,724. The highest full-time equivalent enrollment ranking was Southern Illinois University (20,950), and the low was at East Texas State University (5,461). Gift income and enrollment by distribution are presented in Tables 14 and 15 for the top and bottom institutions, respectively. It can be determined from these data that, while enrollment in the top group was approximately 1.53 times larger than in the bottom group, the total gift income dollars raised by the top group was approximately 132.15 times as much as was raised by the bottom group.

TABLE 14

TOP INSTITUTIONS RANKED BY THREE YEAR GIFT INCOME AND FTE

	University	Total Gift Source		University	FTE
1.	U. of Minnesota	$58,742,799	1.	U. of Minnesota	47,387
2.	U. of Illinois	57,638,033	2.	U. of Wisconsin-Madison	38,717
3.	UCLA	56,663,209	3.	Texas A & M	34,135
4.	U. of Michigan	52,791,689	4.	UCLA	33,065
5.	U. of Wisconsin-Madison	52,203,414	5.	U. of Illinois-Urb.	32,942
6.	Texas A & M	50,850,058	6.	U. of Michigan	32,371
7.	U. of Washington	40,978,831	7.	U. of Washington	29,883
8.	U. of California-Berk.	33,716,277	8.	U. of California-Berk.	28,631
9.	U. of Virginia	32,224,892	9.	U. of Arizonia	25,797
10.	U. of Georgia	31,640,063	10.	U. of Georgia	22,847
11.	U. of Florida	30,897,192	11.	U. of Nebraska	21,675
12.	U. of Missouri-Col.	23,367,395	12.	U. of Missouri-Col.	21,674
13.	U. of Arizona	23,872,696	13.	U. of Houston	20,843
14.	U. of Colorado	21,839,845	14.	U. of Colorado	20,705
15.	U. of Nebraska	20,854,099	15.	U. of Florida	17,959
16.	U. of Houston	17,786,691	16.	Auburn	17,985
17.	Auburn	16,363,173	17.	U. of Virginia	16,002
18.	Oregon State	15,939,261	18.	Oregon State	15,283
19.	U.C.--San Diego	15,459,151	19.	U.C.--San Diego	13,070
20.	U.C.--Irvine	10,708,671	20.	U.C.--Irvine	11,406
	Totals	664,533,639			502,377

TABLE 15

BOTTOM INSTITUTIONS RANKED BY THREE YEAR GIFT INCOME AND FTE

	University	Total Gift Income		University	FTE
1.	Colorado State	$4,977,106	1.	Southern Illinois U.--Carb.	20,950
2.	Kent State	4,548,519	2.	U. of Akron	19,463
3.	Ball State	4,406,614	3.	U. of Wis.--Mill.	19,403
4.	U. of Akron	4,225,766	4.	Ball State	17,215
5.	U.C. Santa Barbara	3,911,343	5.	Kent State	16,667
6.	U. of Wisconsin--Mil.	3,430,409	6.	Colorado State	16,611
7.	U. of New Hampshire	3,141,797	7.	Memphis State	16,510
8.	S. Illinois U.--Carb.	2,984,444	8.	U.C. Santa Barbara	16,434
9.	U. of Toledo	2,893,975	9.	U. of Toledo	16,271
10.	Bowling Green	2,580,578	10.	N. Texas State	16,243
11.	Georgia State	2,125,906	11.	Bowling Green	15,592
12.	Memphis State	2,098,104	12.	Georgia State	14,689
13.	U. of S. Dakota	1,669,334	13.	SUNY--Albany	13,172
14.	SUNY--Albany	1,299,173	14.	U. of S. Mississippi	11,529
15.	SUNY--Stony Brook	1,293,467	15.	U. of New Hampshire	10,545
16.	SUNY--Binghampton	1,281,735	16.	Indiana State	9,876
17.	Indiana State	1,087,134	17.	SUNY--Binghampton	9,832
18.	U. of S. Mississippi	1,082,350	18.	SUNY--Stony Brook	6,003
19.	N. Texas State	831,595	19.	U. of S. Dakota	5,882
20.	E. Texas State	416,724	20.	E. Texas State University	5,461
	Totals	50,286,073			278,348

Analyses of Data for The Top and Bottom Ranked Institutions

Institutions in the top and bottom quartiles on total gift income were asked to provide information on a questionnaire developed to determine practices in use for fund raising. Responses were received from fourteen institutions in the top quartile and eighteen in the bottom group, an overall response rate of 80%. In addition, an analysis was made of relationships between selected financial and inherent institutional characteristics for the two groups of institutions.

Comparison of the Top and Bottom Groups by Gift Income Source

An hypothesis for this study was that there was no significant relationship between institutions with higher and lower giving levels from the following funding sources: alumni, non-alumni, corporations and businesses, foundations, and other groups and sources.

To examine this hypothesis, the Spearman-rank difference method of correlation (rho) was used to determine relationships for the top and bottom groups on gift income index by the five gift sources and the twelve institutional variables. This analysis was followed by the development of a multiple regression equation using a step-wise procedure to identify those variables most likely to predict gift income for each group.

Sources of Income. The results of the Spearman-rank difference method of correlation (rho) between the total gift income index and the five gift income sources for the top institutions showed that all were significant except for the non-alumni and the other groups and each of the income source variables. While the alumni and foundation gift sources were significant, only a low moderate degree of correlation existed, ($r = .47$)and ($r = .44$), respectively.

The results from the rank order correlation (rho) between the total gift income index and the five gift income sources for the bottom institutions showed that all were significant at the .05 level except for the alumni gift income source. The corporation and foundation gift income sources were highly correlated to the total gift income index, ($r = .72$) and ($r = .71$), respectively. Results of data analysis for them are presented in Table 16. For example, it can be seen that the coefficient of correlation for the top and bottom institutions and the alumni gift income source was ($r = .47$) and ($r = .37$) respectively. In this example, the alumni gift income source was not significant for the bottom institutions.

TABLE 16

COEFFICIENTS OF CORRELATION BETWEEN TOTAL GIFT INCOME INDEX (TGII) AND GIFT SOURCES FOR TOP AND BOTTOM RANKED INSTITUTIONS

Institution Ranking	Alumni	Non Alumni	Corporate	Foundation	Other
Top	.4677*	.1759	.7684*	.4376*	.2165
Bottom	.3729	.6887*	.7173*	.7128*	.4453*

*Denotes Significance at the .05 level.

The results of the analysis for the top and bottom institutions related to the total dollars received (not gift income index) from each gift income source are presented in Table 17.

TABLE 17

THREE-YEAR AVERAGE GIFT INCOME BY GIFT SOURCE FOR TOP AND BOTTOM RANKED INSTITUTIONS

Gift Sources	Top			Bottom		
	Mean Dollars	Standard Deviation	Mean Dollar Proportion	Mean Dollars	Standard Deviation	Mean Dollar Proportion
Alumni	$5,395,730	$3,774,617.9	.16	$482,271	$338,722.3	.19
Non-Alumni	5,167,310	3,363,428.1	.16	738,359	567,145.2	.30
Corporate	11,788,115	6,462,930.8	.36	775,290	623,618.5	.31
Foundation	5,913,348	3,514,019.1	.18	269,192	221,578.7	.11
Other	4,808,166	4,585,389.7	.14	225,437	316,870.9	.09

For example, it can be seen that the dollar mean for the alumni gift income source for the top and bottom institutions was $5,395,730 and $482,271, respectively. In addition, the results showed that the mean dollar proportion of gifts received from the alumni source for the top and bottom institutions was .16 and .19, respectively. This means that 16% and 19% of the total gift income dollars received from the top and bottom institutions were from the alumni gift income source. Also, the standard deviation figures show the amount of dispersion from the sample mean for both the top and bottom institutions. For example, the standard deviation for the corporate and foundation gift income of the top institutions was $6,462,930.8 and $3,514,019, respectively. This means that the top institutions had a greater dispersement ($6,462,930.80) of corporate support away from the sample mean than foundation support ($3,514,019). In addition, the proportion of dollars received from corporations for both the top and bottom institutions was greater than any other gift income source, 36% and 31%, respectively. Thus, corporate support is important to both these institutions, but the amount of overall gift income for the top institutions is accounted for in greater proportion by corporate support.

The results showed that the bottom institutions received almost as large a proportion of their support from non-alumni gifts as they received from corporate gifts, 30% and 31%, respectively.

Financial and Inherent Institutional Characteristics for the Top and Bottom Ranked Institutions

The Spearman-rank difference method of correlation (rho) was used for each institutional ranking to determine those variables most closely associated with the total gift income index. This analysis was followed by a step-wise multiple regression equation to identify those variables most likely to predict the gift income index for each institutional ranking.

Top Institutions. The results from the rank order correlation (rho) for the total gift income index with the twelve institutional variables showed coefficients of correlation for only six variables to be statistically significant at the .05 level. Those variables were: federal research and development (FEDRD), legislative appropriations (LEGAPP), age, endowment market value (EMV), number of graduate students, (NGRAD), and educational and general expenditures. Presented in Table 18 are the results of this analysis. The highest correlation coefficient r = .5820, was found between the total gift income index and the endowment market value variable.

The results of the step-wise multiple regression equation for the top twenty ranked institutions resulted in the following equation:

$$\text{Gift Income Index} = 1074.8052 + 2.12444 \times 10^{-6}\ \text{EMV}$$

TABLE 18

COEFFICIENTS OF CORRELATION BETWEEN TOTAL GIFT INCOME INDEX (TGII) AND INSTITUTIONAL VARIABLES FOR TOP RANKED INSTITUTIONS (N = 20)

Institutional Characteristics	r with TGII	Institutional Characteristics	r with TGII
Financial		Inherent	
1. Number of Alumni	.3113	3. In-State Enrollment	.3714
2. Federal Research and Development	.5308*	4. Head Count Enrollment	.3654
3. Legislative Appropriations	.4556*	5. Cost	.2144
4. Student Financial Aid	.1825	6. No. of Graduate Students	.5233*
Inherent		7. Number of Advancement Professionals	.2577
1. Age	.4868*		
2. Endowment Market Value	.5820*	8. Educational and General Expenditure	.4571*

* Denotes significance at the .05 level.

The multiple coefficient of correlation, $r = .56$, was statistically significant at the .05 level. The coefficient of multiple determination, R^2 was .3152, which revealed the proportion of the variance in the total gift income dollar index which was accounted for by the endowment market value dollar index. The forecast efficiency of this formula was found to be 17.25%. The standard error of estimate was $282.39.

Bottom Institutions. The results from the rank order correction (rho) for the total gift income index with the twelve institutional variables showed coefficients of correlation for only three variables to be significant at the .05 level. Those variables were: (1) student financial aid, (2) endowment market value, and (3) cost of attendance. Presented in Table 19 are the results of this analysis.

The results of the step-wise multiple regression equation for the bottom ranked institutions resulted in the following equation:

$$\text{Gift Income Index} = 122.8599 + 7.22212 \times 10^{-6}\ \text{EMV}$$

The multiple coefficient of correlation ($r = .63$) was statistically significant at the .05 level. The coefficient of multiple determination, R^2, was .4014, which revealed the proportion of variance in the total gift income dollar index was predicted by the endowment market value dollar index. The forecast efficiency of this formula was found to be 22.64%. The standard error of the estimate was $66.34.

TABLE 19

COEFFICIENTS OF CORRELATION BETWEEN TOTAL GIFT INCOME INDEX (TGII) AND INSTITUTIONAL VARIABLES FOR BOTTOM RANKED INSTITUTIONS (N = 18)

	Institutional Characteristics	r with TGII		Institutional Characteristics	r with TGII
	Financial			Inherent	
1.	Number of Alumni	.2120	3.	In-State Enrollment	-.0346
2.	Federal Research and Development	.2520	4.	Head Count Enrollment	.0165
3.	Legislature Appropriations	-.0541	5.	Cost	.4190*
4.	Student Financial Aid	.4962*	6.	No. of Graduate Students	-.2618
	Inherent		7.	Number of Advancement Professionals	.3051
1.	Age	.0899			
2.	Endowment Value	.6842*	8.	Educational and General Expenditure	.2887

Denotes significance at the .05 level.

Fund Raising Program Practices

This section contains the results of the data analysis undertaken to test the six hypotheses related to the top and bottom ranked institutions on their fund raising program practices. The six hypotheses were associated with the four program components of: (1) Institutional, (2) Organizational, (3) Method, and (4) Emphasis. The Chi-square non-parametric test of significance was used to determine if a relationship existed between the top and bottom institutions on these components. Descriptive analyses were presented for: (1) the distinguished academic programs, (2) the reasons why people give money, and (3) the future program improvements anticipated. A significance level of $p \leq .05$ was required to reject the null hypothesis of no relationship.

The results of testing each hypothesis and the factors associated with them are presented below.

Institutional Components

An hypothesis for this study was that there would be no significant relationship between distinguishable institutional traits and total gift income. The distinguishable institutional traits considered in this study were: location, academic programs, program strength, alumni chapters, institutional commitment to fund raising, athletic teams, reasons for giving, communication efforts and other institutional policies.

The results of the Chi-square tests of independence indicated that a statistically significant difference was found at the .05 level between the top and bottom institutions on only three factors. These were: (1) location, (2) overall strong research focus, and (3) number of alumni chapters. Thus, the null hypothesis of no relationship was rejected for these factors and accepted for the others. Presented in Table 20 are the results. For example, it can be seen that the Chi-square value of 7.2127 was obtained between the top and bottom groups on location. This value was statistically significant at the .02 level, so it was significant at the criterion level of .05. Other data are to be read and interpreted likewise.

The responses from the top and bottom institutions on the location variable revealed that the top institutions were located only in the rural and suburban areas, while the bottom institutions were more evenly distributed between the three locations of rural, urban, and suburban. Respondents from top institutions felt their institution had an over-all strong research focus compared to selective research areas or teaching and public service strengths revealed by the bottom institutions. The findings on the number of alumni chapters revealed that the top twenty institutions had an overall greater number of alumni chapters then did the bottom institutions.

TABLE 20

CHI-SQUARE RESULTS FOR DIFFERENCES BETWEEN TOP AND BOTTOM GROUPS ON INSTITUTIONAL COMPONENT FACTORS

	Institutional Factors	X^2	df	p
1.	Location	7.2127	2	.0272*
2.	Reputation	5.9259	2	.0517
3.	Overall Strong Research	7.6519	1	.0057*
4.	Selective Research	.8465	1	.3575
5.	Strong Undergraduate	.2016	1	.6535
6.	Strong Undergraduate and Graduate Teaching	.2611	1	.6060
7.	Public Service	.0000	1	1.0000
8.	Athletics	7.4975	3	.0576
9.	Commitment to Fund Raising	5.3268	3	.1494
10.	Alumni Chapters	16.2610	6	.0124*
11.	Fund Raising Council	.0726	1	.7876
12.	Communication	.0698	3	.7844
13.	Comprehensive Campaign	1.6931	2	.4289
14.	Met Goal	2.9405	2	.2299
15.	Donor Data	4.5475	3	.2081
16.	Computer Research	.1088	1	.7415
17.	Percentage Increase	2.7353	5	.7407

*Denotes significance at the .05 level.

The results of the frequency tabulation for why people give money can be seen in Table 21. The responses most frequently selected were: (1) out of loyalty, (2) the right person(s) ask, and (3) altruistic feelings about the university.

While the variations in frequency responses were not extreme, it was interesting to note that four respondents from the bottom institutions cited the tax benefits factor, and none from the top institutions cited that factor. No respondents identified gift club membership as a factor. While institutions and organizations use gift club membership for categorizing gift levels, for donor recognition, and for donor upgrade, this was not an important factor for why people give money.

Respondents were asked to identify the three most distinguishable academic programs at their institution. Response frequencies are shown in Table 22 for the top group of institutions and Table 23 for the bottom group of institutions. The general observation which could be made from the responses was that the bottom institutions identified a greater number of distinguishable programs; whereas, the top institutions identified a larger percentage of programs in the science and professional program areas.

A statistically significant difference was found between the top and bottom groups of institutions on only three factors: (1) location, (2) strong research focus, and (3) number of alumni chapters.

TABLE 21

FREQUENCY RESPONSES FOR WHY PEOPLE GIVE MONEY FOR THE TOP AND BOTTOM INSTITUTIONS

Reasons for Giving Money	Top Institution Frequency	Bottom Institution Frequency
1. Tax benefits	0	4
2. Excellent Case Statements	5	3
3. Gift Club Membership	0	0
4. People visit and see the need	2	2
5. Feeling of obligation	3	3
6. Strong donor recognition	3	1
7. Out of loyalty	9	12
8. The right person(s) ask	10	13
9. Altruistic feelings about the University	7	7
Totals	39	45

TABLE 22

FREQUENCY RESPONSES FOR DISTINGUISHABLE PROGRAMS FOR THE TOP INSTITUTIONS

	Academic Programs	Frequencies
	Science Programs	
1.	Biochemistry	1
2.	Microelectronics	1
3.	Nuclear Fusion	1
4.	Chemistry	3
5.	Physics	1
	Professional Programs	
1.	Law	2
2.	Graduate Business	1
3.	Architecture	3
4.	Engineering	6
5.	Journalism	3
6.	School of Medicine	1
7.	Accounting	1
8.	Agriculture	4
9.	Graduate Education	1
10.	Professional Education	1
11.	Veterinary Medicine	1
12.	Chemical Engineering	1
	Miscellaneous	
1.	Graduate Ph.D.	1
2.	Extension	1
3.	Creative Writing	1
	Total	35

TABLE 23

FREQUENCY RESPONSES FOR DISTINGUISHABLE PROGRAMS FOR THE BOTTOM INSTITUTIONS

	Academic Programs	Frequencies
	Science Programs	
1.	Polymer Chemistry	1
2.	Physics	3
3.	Chemistry	3
4.	Institute for Earth, Ocean, Space	1
5.	Marine Institute	1
6.	Liquid Crystal	1
7.	Atmospheric Science	1
8.	Polymer Science	1
9.	Biotechnology	1
10.	Aviation Technology	1
11.	Biology	2
	Professional Programs	
1.	Polymer Engineering	1
2.	Law	2
3.	School of Health Studies	1
4.	Architecture	2
5.	Accounting	4
6.	Engineering	2
7.	College of Education	3
8.	Veterinary Medicine	1
9.	School of Medicine	2
10.	School of Business	2
11.	Nursing	1
	Miscellaneous	
1.	Industrial Psychology	1
2.	Theatre	1
3.	Religious Studies	1
4.	Creative Studies	1
5.	School of Fashion Design	1
6.	Government	1
7.	Psychology	3
8.	English	1
9.	Radio and Television	1
10.	Political Science	1
11.	Creative Writing	1
12.	Fine Arts	1
13.	Music	1
	Total	52

Organizational Components

An hypothesis for this study was that there would be no significant relationship between organizational variables and gift income. The organizational variables were: structure, number of staff (professional and support), goal setting, planning, budgets, dollars expended, the number of years the institution had been involved in organized fund raising, years of employment of chief development officer, and term of service of staff.

The results of the Chi-square tests of independence indicated that differences between the top and bottom groups on five out of nine factors were statistically significant. The differences were statistically significant for the factors of: (1) organizational structure, (2) number of professional fund raisers, (3) number of support staff, (4) years of employment of the chief development officer, and (5) the fund raising budget. Thus, the null hypothesis of no relationship was rejected for these factors and accepted for the other factors. The results of this analysis are presented in Table 24. One factor--the dollars expended to raise a dollar--was eliminated from analysis because of insufficient data. It seemed most people either did not know the information requested or they did not know how to answer the question.

TABLE 24

CHI-SQUARE RESULTS FOR DIFFERENCES BETWEEN TOP AND BOTTOM GROUPS ON ORGANIZATIONAL COMPONENT FACTORS

	Organizational Factors	χ^2	df	p
1.	Years in Fund Raising	14.8753	8	.0616
2.	Organizational Structure	5.3098	1	.0212*
3.	Number of Professional Fund Raisers	12.8421	2	.0016*
4.	Number of Support Staff	16.9764	2	.0002*
5.	Years for Development Director	8.1602	2	.0169*
6.	Average Term of Service	3.1279	3	.3723
7.	Institutional Priorities	.0000	1	1.0000
8.	Dollar Goals	.0000	1	1.0000
9.	Fund Raising Budget	17.3714	2	.0002*

*Denotes significance at the .05 level

The results of the Chi-square analyses regarding the organizational structure factor revealed that more top institutions had a combination of centralized and decentralized organizational structure, while more respondents from bottom institutions indicated they had a centralized organizational structure. The findings for the number of fund raising professionals revealed that most bottom institutions had fewer numbers of fund raising professionals than did the top ranked institutions. The results for the number of support staff members revealed that the top institutions employed more support staff members than did the bottom institutions. These results seem logical since the top institutions also employ a greater number of professional fund raisers.

The findings about the number of years a chief development officer had been employed at an institution revealed a greater number of individuals employed at the bottom institutions for an average of five years and less, while longer terms of service were found at the top institutions. The results of the findings on the fund raising budget factor revealed that the top institutions had an overall larger fund raising budget than did the bottom institutions.

The results from the organizational component analyses revealed findings which accorded with findings of previous research.

Method Component

One hypothesis for this study was that there would be no significant relationship between fund raising program factors and total gift income. The fund raising program variables were: annual giving, major gifts, deferred giving, corporate giving, and foundation giving. Another hypothesis for this study was that there will be no significant relationship between solicitation methods of fund raising and gift income. The solicitation methods considered in this study were: direct mail, telephone, written proposals, and personal solicitations.

The results of the Chi-square analysis revealed that none of the differences in fund raising methods used by the top and bottom groups were statistically significant. Thus, the null hypothesis of no relationship was accepted. The results of the analyses are presented in Table 25.

The results of the method component analysis revealed that there was no significant difference between the top and bottom institutions in the fund raising programs they have established and the solicitation techniques they use to raise funds.

Emphasis Component

One hypothesis for this study was that there would be no significant relationship between the emphasis placed on certain areas in the fund raising program and gift income. The emphases to be considered in this study were those identified by the development director.

Chi-square tests of independence for differences between the top and bottom groups revealed that there was no significant relationship between the current emphasis placed on certain areas in the fund raising program and gift income. All fund raising program variables were identified as important in both the top and bottom ranked institutions. Thus, the null hypothesis of no relationship was accepted..

TABLE 25

CHI-SQUARE RESULTS FOR DIFFERENCES BETWEEN TOP AND BOTTOM GROUPS ON METHOD COMPONENT FACTORS

	Methods of Fund Raising	χ^2	df	p
1.	Annual Giving	.0164	1	.8981
2.	Major Gifts	No χ^2 since all responses fell in one cell.		
3.	Deferred Gifts	.9867	1	.3206
4.	Corporate Gifts	.0000	1	1.0000
5.	Foundation Gifts	.9867	1	.3206
6.	Capital Campaigns	.9697	1	.3248
7.	Direct Mail	.2036	2	.9032
8.	Telephone	2.6916	3	.4417
9.	Written Proposals	.8145	2	.6655
10.	Personal Solicitations	1.7065	2	.4260
11.	Volunteers	4.2963	3	.2312
12.	President	1.7308	2	.4209
13.	Academic Officers	3.5491	3	.3145
14.	Trustees	3.7730	3	.2918
15.	Faculty	.6206	2	.7332
16.	Students	6.7831	3	.0791
17.	Professional Staff	2.1719	3	.5375

Another hypothesis for this study was that there would be no significant relationship between the emphasis expected to be placed on certain areas in the fund raising program during the next three years and gift income.

The results of the Chi-square analyses on emphases to be placed in the next three years revealed one factor to be significant at the .05 level. The significant factor was Annual Giving. Respondents from the bottom institutions indicated they placed greater emphasis on Annual Giving than did respondents from the top institutions. The results of this analysis are presented in Table 26.

TABLE 26

CHI-SQUARE RESULTS FOR DIFFERENCES BETWEEN TOP AND BOTTOM GROUPS ON EMPHASIS COMPONENT FACTORS

	Emphasis Factors	X^2	df	p
1.	Annual Giving Emphasis	15.3993	2	.0005*
2.	Major Giving Emphasis	.0000	1	1.0000
3.	Deferred Giving Emphasis	2.2786	2	.3200
4.	Corporate Giving Emphasis	.8766	2	.6451
5.	Foundation Giving Emphasis	2.5928	3	.4588

* Denotes significance at the .05 level

The frequency tabulations of the most important improvements which respondents would make to better their program five years from now can be seen in Table 27 for the top institutions and Table 28 for the bottom institutions.

TABLE 27

IMPROVEMENT AREAS CITED
FOR TOP INSTITUTIONS

	Improvement Responses	Frequency
1.	More Budget	3
2.	Experienced Staff	3
3.	More Staff	3
4.	Better Support Staff	1
5.	Trained Volunteers	2
6.	More Centralization	1
7.	Better Management	1
8.	Accountability	1
9.	Educate Faculty About Developments	1
10.	Keep Expectations Realistic	1
11.	Increase Gifts from Individuals	1
12.	Increase Gifts from Foundations	1
13.	Better Prospect Research	1
14.	Better Economic Conditions	1
15.	Better Support for Publications	1
16.	Use Deans in Campaigns	1
17.	Need Director of Development	1
18.	More Presidential Involvement	1
19.	Need Fund Raising Goals Defined	1
20.	Better Donor Management System	1
21.	New Location	1
22.	More Space	1
23.	Improve Gift Processing	1
	Total	30

TABLE 28

IMPROVEMENT AREAS IN BOTTOM INSTITUTIONS

	Improvement Responses	Frequency
1.	Need Donor Accounting System	1
2.	More Staff	7
3.	Need Corporate/Foundation Staff	1
4.	More Budget	5
5.	More Presidential Involvement	2
6.	Need Stronger Board of Trustees	2
7.	More Private Giving Not State Appropriations	1
8.	Change Administrative Philosophy for More External Affairs	1
9.	House Officers in One Building	1
10.	Better Record System	1
11.	Better Data on Donors	1
12.	Better Volunteer Support	1
13.	More Space	1
14.	Need Chancellor Commitment	1
15.	Better University Planning	1
16.	More Constituency Fund Raisers	1
	Total	31

The only improvement areas cited by respondents of both groups were more staff, budget, and space. Of all improvement areas cited by respondents in this bottom group, 42% were for improvements in these areas compared to 23% of the respondents in the top group. More kinds of improvements were cited by the top group respondents (23) than by those in the bottom group (16). Improvement areas cited by respondents in the top group seemed more sophisticated than those made by respondents from the bottom group. It was interesting to note that respondents in the top institutions identified the need for more experienced staff members, while those in the bottom institutions did not place a specific criteria to their request for more staff. It was also interesting to note the similarity in total number of responses given by respondents of both the top and bottom groups, 30 and 31, respectively.

Summary

This chapter contained the results of analyses of the top and bottom ranked institutions on: (1) the total gift income index with the gift sources, (2) the institutional characteristic variables, and (3) the results of fund raising program practices.

The results of the rank difference correlations, rho, with all the institutional characteristic variables for the top institutions showed that five relationships were significant: federal research and development, legislative appropriations, endowment market value, number of graduate students, and educational and general expenditures.

The results of this same method of correlation (rho) revealed that only three relationships for the bottom institutions were statistically significant. The variables were: student financial aid, endowment market value, and cost of attendance.

The results of the Chi-square tests of independence between the top and bottom groups and the fund raising practices at each revealed relationships between eight factors were statistically significant. These factors were location, strong research focus, alumni chapters, organizational structure, number of professional fund raisers, number of support staff, years of employment for the chief development, and annual giving emphasis for the next three years.

Thus, the results of these analyses for the top and bottom institutions revealed significant differences between the top and bottom groups of institutions in their fund raising practices. One interesting fact observed was the results of the multiple regression equation for these institutions. The results revealed endowment market value as the only variable which had predictive capabilities for both the top and bottom ranked institutions.

Chapter VI

SUMMARY, CONCLUSIONS, RECOMMENDATIONS

Summary

This study was conducted to determine which of several institutional characteristics were associated most closely with an institution's gift income and to determine which fund raising practices and programs were utilized at certain institutions. Since federal and state legislative appropriations provide only the minimum funding necessary for institutions to conduct their teaching, research, and service functions, it was believed important to examine what factors might be associated with an institution's private gift income. By knowing these factors, strategies could be undertaken to increase this support which should ultimately enhance the overall quality of the institution.

Through this study several factors were examined and analyzed. These factors were divided into three major categories: (1) the analysis of all seventy-seven institutions with all the gift sources and institutional characteristic variables, (2) the analysis of class of institution and region of the country with all the gift source and institutional characteristic variables, and (3) the analysis of the top and bottom ranked institutions with all the gift source and institutional characteristic variables and their fund raising practices.

All Seventy-Seven Institutions

The results of the analysis for all seventy-seven institutions indicated that all the gift source variables--alumni, non-alumni, corporation, foundation, and other--were significant at the .05 level. Additionally, all twelve of the institutional characteristic variables for both the financial resource area (number of alumni, federal research and development, legislative appropriations and student financial aid) and the inherent institutional area (age, endowment market value, in-state enrollment, total enrollment, cost, number of graduate students, number of advancement professionals, and educational and general expenditures) were significantly related.

The corporate gift source variable was the most highly correlated variable to the total gift income index, ($r = .92$). Further examination of this variable revealed its significance and high degree of correlation throughout this study.

The results of the step-wise multiple regression equation revealed that the federal research and development dollar index and the endowment market value dollar index variables best accounted for the proportion of variance in the total gift income index. The forecast efficiency of the equation was found to be 30%.

Thus, federal research and development support was found important to all these public research and doctoral granting institutions. In addition, the endowment market value of these institutions was important because this factor means that once money is endowed it's impact and influence goes on for perpetuity. With wise investment policies and focused fund raising campaigns, institutions can secure and enhance certain program funds, so that the annual giving program focuses more on enlarging the donor base, encouraging donor upgrades, and generating annual operating funds.

Class of Institution and Region of the Country

Class of Institution. The results of the analyses for this area revealed that with the four institutional classifications: RI, RII, DGI, and DGII, all the gift income sources variables were significantly related except the other group and source variable for the RII and DGII institutions.

The findings of the institutional characteristic variables were examined for each classification:

RI Institutions

Only four of the twelve institutional characteristic variables were significant: federal research and development, legislative appropriations, number of graduate students, and educational and general expenditures. It was interesting to note that since the RI institutions are generally the more research focused institutions, the significance of these four institutional variables was consistent with the goals of these institutions. Additionally, the results of the step-wise multiple regression equation revealed legislative appropriations and federal research and development variables as the only predictive variables for purposes of the total gift income index.

RII Institutions

There were only three of the twelve institutional characteristic variables which were significantly related: age, endowment market value, and educational and general expenditures. The noticeable difference in this classification was the lack of a significant relationship with the other group gift income source. Only the DGII institutions had the same result of no significant relationship. A similar result was found in the step-wise multiple regression equation. Endowment market value was the only predictive variable identified for this classification as well as the DGII institutions.

DGI Institutions

There were only three of the twelve institutional characteristic variables which were significantly related to the gift income index. They were endowment market value, number of advancement professionals, and educational and general expenditures. The significant relationship between the number of advancement professionals and gift income index was evidenced only in this classification not the others (RI, RII, and DGII).

The results of the step-wise multiple regression equation showed endowment market value and educational and general expenditures as the only predictive variables for purposes of the total gift income index.

DGII Institutions

The results of the analysis for this classification were interesting because only one variable--endowment market value--was significantly related to gift income. It was no wonder then that this variable was the only one identified in the step-wise multiple regression equation. Similar to the RII classification with the gift source variable--the other groups and sources--variable was not significantly related, and the endowment market value variable was the only predictive variable identified in the step-wise multiple regression equation.

In summary, it was found that corporate support was significantly correlated to all these institutional classifications. In addition, endowment market value was the predictive variable in three of the step-wise multiple regression equations for the RII, DGI, and DGII institutions, while federal research and development support and legislative appropriations were the predictive variables for the RI institutions.

The results also revealed that five institutional characteristic variables were not significantly related to the gift income index in all of the institutional classifications. They were number of alumni, student financial aid, in-state enrollment, total enrollment, and cost of attendance.

Region of the Institution. The results of the analysis for this area revealed that with the five regional areas: East, Midwest, Southeast, Southwest, and West, all the gift source variables were significantly related to the gift income index except the non-alumni variable for the southeastern region.

The findings of the institutional characteristic variables were examined for each region of the country.

Eastern Institutions

In this region all the institutional characteristic variables were significantly related to the gift income index. This is the only region within this study where these results were found. The results of the step-wise multiple regression equation revealed federal research and development and age of the institution to be the predictive variables for the total gift income index.

Another interesting observation was that throughout this study, the variable--age of institution--was found in the step-wise multiple regression equation only for this classification. The importance of this variable may be the historical heritage of these institutions and their early founding dates.

Midwestern Institutions

Only two institutional characteristic variables were not significantly related to the gift income index in this classification. They were student financial aid and cost of attendance. The results of the step-wise multiple regression equation revealed alumni as the only predictive variable to the total gift income index. This variable was found in only this classification.

Southeastern Institutions

This classification was the only one throughout the regional analysis which didn't identify all the gift income source variables as significantly related. In this region, non-alumni support was found not significant at the .05 level.

There were four institutional characteristic variables which were not significantly related to the gift income index. They were student financial aid, in-state enrollment, total enrollment, and number of graduate students. The number of graduate students variable was found as not significant only within this regional classification. All other regions, this variable was significantly related at the .05 level.

The findings from the step-wise multiple regression equation showed federal research and development and the endowment market value variables as the only predictive variables to the total gift income index. Again, this region was the only region in which endowment market value was identified in the results of the step-wise multiple regression equation.

Southwestern Institutions

Only three of the twelve institutional characteristic variables were found not significantly related to the gift income index. There were age, cost of attendance, and number of advancement professionals. The identification of the variable--number of advancement professionals--was not significantly related and was found only in this regional classification. That variable was found to be significantly related at the .05 level for institutions in all other areas.

The findings from the step-wise multiple regression equation revealed only one variable--legislative appropriations--as the only predictive variable for the total gift income index. This regression equation variable was identified only in this regional classification.

Western Institutions

There were only four of the twelve institutional characteristic variables which were found not significantly related to the gift income index. They were legislative appropriations, age of the institution, endowment market value, and cost of attendance. Unique to this regional classification were the two variables--legislative appropriations and endowment market value. In only this area were these variables found as not significantly related at the .05 level, while in all the other regions these variables were significantly related to the gift income index.

The variable--age of the institution--was identified as not significantly related to the gift income index in this region and in the southwestern region. One might conjecture it was because many of these institutions were younger in comparison to those in the eastern locations.

The results of the step-wise multiple regression analyses were that the variable, federal research and development, was the only predictive variable to the total gift income index.

In summary, the results of the regional classification analyses revealed that three variables were significantly related to the gift income index for all the institutions. Those variables were number of alumni, federal research and development, and educational and general expenditures.

The Top and Bottom Ranked Institutions

The results of the analysis for the top and bottom ranked institutions was completed in two major sections. The first section dealt with all the gift income and institutional characteristic variables. The second section dealt with the results of the fund raising program practices. The findings from these two sections are presented below.

Gift Income and Institutional Characteristic Variables

Top Institutions

The results of the gift income source analysis revealed that two variables--non-alumni and other groups and sources--were not significantly related at the .05 level. All other variables--alumni, corporate, and foundation--were significantly related to the gift income index.

The results of the institutional characteristic variables revealed only six out of the twelve variables as significantly related to the gift income index. They were federal research and development, legislative appropriations, age, endowment market value, number of graduate students, and educational and general expenditures. It was interesting to note that all these variables involve money except age of the institution. Since these institutions were identified as a result of their high ranking on the total gift income index, it was no wonder then that variables associated with money (except age) were found to be significantly related to the total gift income index.

The findings from the step-wise multiple regression equation found endowment market value as the only predictive variable to the total gift income index.

Bottom Institutions

The results of the gift income source analysis found all variables significantly related except alumni support. This was an interesting result since this variable was significantly related to the total gift income index in the regional classification, but it was not significantly related in the research classification and the top and bottom ranking.

The findings from the institutional characteristic analyses revealed that only three variables were significantly related to the total gift income index. They were student financial aid, endowment market value, and cost of attendance. Only the endowment market value variable was found to be significantly related in both the institutional rankings.

The results of the step-wise multiple regression equation revealed that endowment market value was the only predictive variable to the total gift income index.

In summary, there was only one variable which was found in the step-wise multiple regression equation for both the top and bottom institutions. That variable was endowment market value. It seemed this variable was important to both these groups and the perceived wealth of these institutions.

Fund Raising Program Practices

The results of the Chi-square tests of independence for determining if differences existed between the top and bottom institutions indicated that a statistical difference was found in nine program practices. The significant differences were identified within the four program components identified in this study. The program components were: (1) Institutional Component, (2) Organizational Component, (3) Method Component, and (4) Emphasis Component.

Institutional Component. The results of the Chi-square tests of independence indicated that a statistical difference was found in these three institutional components: location, overall strong research focus, and number of alumni chapters.

The results of the analyses revealed that the top institutions were only located in the rural and suburban areas, whereas the bottom institutions were located in three areas--rural, urban, and suburban.

The results of the analysis for the academic strength variable revealed that the top institutions identified an overall strong research focus, whereas the bottom institutions identified selective research areas, or teaching and public service areas. The significant difference from the respondents for these two groups seemed appropriate since the top research institutions were the research focused institutions. It was no wonder then that RI institutions found federal research and development and legislative appropriations variable important in the step-wise multiple regression equation. Their focus is research and they rely on the appropriate funding for it.

The results of the analysis for the number of alumni chapters revealed a significant difference between the top and bottom institutions. The top institutions indicated an overall greater number of alumni chapters then did the bottom institutions.

Organizational Component. This component contained the greatest number of significant differences in program practices. The significant differences pertained to: organizational structure, number of fund raising professionals, number of support staff, the number of years of service of the chief development officer, and the size of the fund raising budget.

The results of the analysis on organizational structure revealed that the combination organizational structure of centralized and decentralized were most likely to be selected by the top ranked institutions while the bottom ranked institutions indicated a more centralized structure.

The results regarding the size of the professional fund raising staff revealed the top institutions to have larger professional staff members as well as support staff members then the bottom ranked institutions. Because of the larger staff sizes of the top institutions, it was no wonder then that their organizational structures were more a combination of centralized and decentralized then totally one or the other.

The results of the analysis regarding number of years the chief development officer had been employed at an institution revealed that at the top institutions the chief development officers had longer years of service--approximately 5-7+ years of service in comparison to the five or less years of service found in the bottom ranked institutions.

The results of the analysis regarding fund raising budgets revealed that the top institutions had budgets ranging from $500,000 to over $6 million, whereas the bottom institutions had no budget figures over the $2 - $3 million mark. It seemed logical then that the top institutions had larger budgets since their staff sizes were also significantly larger.

Method Component. The results of this analysis revealed no significant differences in the types of fund raising programs included in the fund raising budget and the techniques and types of solicitors used to raise funds. Certain sections in this component might have been significant if forced choice answers would have been requested in the questionnaire. It was not surprising, however, that all programs and techniques were identified as important by both institutional rankings.

Emphasis Component. There was only one factor identified as statistically significant in this component area. The increased emphasis of the annual giving program for the bottom ranked institutions was significantly different from the top institutions. The bottom institutions identified their annual giving program as an area for heavy emphasis in the next three years while the top institutions placed no heavy emphasis in any particular fund raising area.

In summary, the results found in this study with the fund raising program practices between top and bottom institutions substantiated the results found in the review of literature. The top institutions usually had larger budgets and more staff members. These institutions were identified as having overall strength in their research offerings and they were more likely to have an organizational structure which was a combination of the centralized and decentralized model.

Conclusions

The results from the analysis permit the following conclusions to be drawn in relationship to the hypotheses:

1. The null hypothesis that there would be no significant relationship between gift income and all the financial resource variables was rejected. The variables were number of alumni, federal research and development, legislative appropriations, and student financial aid.
2. The null hypothesis that there would be no significant relationship between gift income and each of the inherent institutional variables was rejected. The variables were: age, endowment market value, in-state enrollment, total enrollment, cost, number of graduate students, number of advancement professionals, and educational and general expenditures.
3. The null hypothesis that there would be no significant relationship between and across classification of institution by Carnegie type was rejected. The following variables were significant for each institutional classification:

   RI: federal research and development, legislative appropriations, number of graduate students, and educational and general expenditures.

   RII: age, endowment market value, and educational and general expenditures.

   DGI: endowment market value, number of advancement professionals, and educational and general expenditures.

DGII: endowment market value.

4. The null hypothesis that there would be no significant relationship between institutions with higher and lower giving levels from the funding sources of alumni, non-alumni, corporations and businesses, foundations, and other groups and sources was rejected.

   Top Institutions: alumni, corporations and foundations.

   Bottom Institutions: non-alumni, corporations, foundations and other.

   The null hypothesis of no relationship was accepted for:

   Top Institutions: non-alumni and other groups and sources.

   Bottom Institutions: alumni.

5. The null hypothesis that there would be no significant relationship between distinguishable institutional traits and gift income was rejected for the following traits: location, overall strength of research, and number of alumni chapters.

   The null hypothesis of no relationship was accepted for the following distinguishable traits: academic programs, institutional commitment to fund raising, reasons for giving, communication efforts, donor data base, computer research and gift processing, athletic teams, fund raising counsel, and capital campaigns.

6. The null hypothesis that there would be no significant relationship between fund raising organizational factors and gift income was rejected for the following factors: structure, number of professional fund raisers, number of support staff, terms of development director service, and fund raising budget.

   The null hypothesis of no relationship was accepted for the following organizational component factors: years in fund raising, institutional priorities, and dollar goals.

7. The null hypothesis that there would be no significant relationship between fund raising program variables and gift income was accepted for all of the following variables: annual giving, major gifts, deferred giving, corporate giving, foundation giving and capital campaigns.

8. The null hypothesis that there would be no significant relationship between solicitation methods of fund raising and gift income was accepted for all of the following variables: direct mail, telephone, written proposals, and personal solicitations.

9. The null hypothesis that there will be no significant relationship between the emphasis placed on certain areas in the fund raising program and gift income was accepted.

10. The null hypothesis that there would be no significant relationship between emphasis to be placed on certain areas in the fund raising program for the next three years was rejected for the annual giving program.

    The null hypothesis was accepted for: major giving, deferred giving, corporate giving, foundation giving, and the percentage increase in fund raising efforts.

11. The null hypothesis that there would be no significant difference between certain regions of the country and gift income was rejected. The following variables were significant for each regional classification:

East:	all twelve of the institutional characteristic variables were significant.
Midwest:	number of alumni, federal research and development, legislative appropriations, age, endowment market value, in-state enrollment, total enrollment, number of graduate students, number of advancement professionals, and educational and general expenditures.

Southeast: number of alumni, federal research and development, legislative appropriations, age, endowment market value, cost of attendance, number of advancement professionals, and educational and general expenditures.

Southwest: number of alumni, federal research and development, legislative appropriations, student financial aid, endowment market value, in-state enrollment, total enrollment, number of graduate students and educational and general expenditure.

West: number of alumni, federal research and development, student financial aid, in-state enrollment, total enrollment, number of advancement professionals, and educational and general expenditures.

This study was undertaken to identify which of several institutional characteristics were associated most closely with an institution's gift income and to determine which fund raising practices and programs were utilized at institutions in the top and bottom quartiles by total gift income index.

The results of the study revealed that all twelve of the institutional characteristic variables which were identified were significantly correlated to the total gift income index of all seventy-seven institutions.

Additionally, the results from the multiple regression equations revealed that the regional classifications had more efficient predictions for the total gift income index then the predictions by institutional type.

Also, a general statement could be made regarding the importance of legislative appropriations and federal research and development grants to these public research and doctoral granting institutions. If American higher education is going to achieve its goal of providing the best educational system to its people, then it must be properly funded. Additionally, the administrators of these institutions must be excellent financial managers, and they must be accountable for the funds they receive, the programs they offer, and the funds they raise.

It was also important to note that endowment market value was a significant variable in this study. It was the variable found most frequently in the predictive formulae. The size of an institution's endowment market value is reflective in the fund raising program and the investment policies of the institution. With aggressive fund raising programs and with wise investment policies and stewardship reports to donors, institutions can enlarge their endowments, thereby increasing their institution's overall wealth.

The accomplishments of a development program are based on the commitment and involvement of the president and the constituency volunteers. To be effective, they must be trained, and they must have goals and plans to accomplish those goals. To do this, the development director must know the most effective methods for fund raising, and they must know what factors seem to be most closely associated with the gift income levels which have been identified. This study was an attempt to address these concerns and to encourage further research in this area.

Recommendations

The following recommendations are offered as suggestions for additional research:

1. This study should be replicated, but with the identification of additional variables. The addition of other variables would further enhance the results of this and future studies.
2. This study should be replicated for public comprehensive universities. Another replication would be the examination of private research universities. However, a few variables might have to be changed to better represent the private focus.

3. This study should be replicated without the use of the gift income index. Use of the three year average gift income figure might provide different results and a different focus to the study.
4. This study could be expanded to include the survey responses of those middle institutions regarding their fund raising program. This might provide different results regarding their instrument and the fund raising programs.
5. The fund raising questionnaire could be changed slightly to encourage forced choice answers. This should provide better results regarding program emphasis. Additionally, fewer response selections might also enhance a better analysis of fund raising program and solicitation areas.
6. I would further recommend that the Council for Financial Aid to Education (CFAE) strongly encourage all institutions to complete the annual CFAE report. The data from this report could enhance further research studies on amounts and types of gift income raised by different types of institutions.

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APPENDIX A

LISTING OF ALL RESEARCH I AND RESEARCH II INSTITUTIONS

Research I Institutions

University of Arizona
University of California, Berkeley
University of California, Davis
University of California, Los Angeles
University of California, San Diego
Colorado State University
Universtiy of Colorado at Boulder
University of Florida
University of Georgia
University of Hawaii at Manoa
University of Illinois, Urbana
Purdue University, Main Campus
University of Iowa
University of Maryland, College Park Campus
Michigan State University
University of Michigan, Ann Arbor
University of Minnesota of Minneapolis-St. Paul
University of Missouri, Columbia
North Carolina State University at Raleigh
University of North Carolina at Chapel Hill Main Campus
Oregon State University
Ohio State University, Main Campus
Pennsylvania State University, Main Campus
University of Pittsburgh, Main Campus
Texas A&M University, Main Campus
University of Texas at Austin
University of Utah
University of Washington
University of Wisconsin, Madison

Research II Institutions

Auburn University, Main Campus
University of Arkansas, Main Campus
University of California, Irvine
University of Connecticut, Main Campus
Florida State University
Georgia Institute of Technology, Main Campus
Indiana State University at Bloomington
Iowa State University of Science and Technology
Kansas State University of Agriculture and Applied Sciences
University of Kansas, Main Campus
University of Kentucky
Louisiana State University and A&M College at Baton Rouge
University of Massachusetts, Amherst
Wayne State University
Mississippi State University
University of Nebraska, Lincoln
Rutgers, The State University of New Jersey, New Brunswick Campus
University of New Mexico, Main Campus
City University of New York Graduate School and University Center
State University of New York at Buffalo, Main Campus
State University of New York at Stony Brook, Main Campus
University of Cincinnati, Main Campus
Oklahoma State University, Main Campus
University of Oklahoma, Norman Campus
University of Oregon, Main Campus
Temple University
University of Tennessee at Knoxville
Utah State University
University of Vermont and State Agriculture College
University of Virginia, Main Campus
Virginia Polytechnic Institute and State University
Washington State University
West Virginia University

APPENDIX B

LISTING OF ALL DOCTORAL GRANTING I AND DOCTORAL GRANTING II INSTITUTIONS

Doctorate-Granting Universities I

The University of Alabama
Arizona State University
University of California, Riverside
University of California, Santa Barbara
University of California, Santa Cruz
University of Northern Colorado
University of Delaware
Georgia State University
University of Idaho
Northern Illinois University
Southern Illinois University at Carbondale
University of Illinois, Chicago Circle Campus
Ball State University
University of Louisville
University of Maine at Orono
University of Mississippi, Main Campus
University of Southern Mississippi
University of Missouri, Kansas City
Montana State University
University of Montana
University of New Hampshire
New Mexico State University, Main Campus
Cornell University Statutory Colleges
State University of New York at Albany
State Universtiy of New York at Binghamton
University of North Dakota, Main Campus
Kent State University, Main Campus
Ohio University, Main Campus
University of Toledo
University of Rhode Island
Clemson University
University of South Carolina, Main Campus
North Texas State University
Texas Technological University
University of Houston, Main Campus
Virginia Commonwealth University
University of Wisconsin, Milwaukee
University of Wyoming

Doctorate-Granting Universities II

University of Alaska at Fairbanks
University of South Florida
Idaho State University
Illinois State University
Indiana State University, Main Campus
Western Michigan University
University of Missouri, Rolla
University of Nevada at Reno
University of North Carolina at Greensboro
North Dakota State University, Main Campus
Bowling Green State University, Main Campus
Miami University, Main Campus
University of Akron, Main Campus
North Dakota State University
University of South Dakota, Main Campus
Memphis State University
East Texas State University
Texas Woman's University
College of William and Mary, Main Campus

APPENDIX C

INSTITUTIONS IDENTIFIED IN THIS STUDY PER CLASSIFICATION

Institutions Included In This Study
Per Classisification

Research I

U. of Arizona
UC - Berkeley
UC - Davis
UC - Los Angeles
UC - San Diego
U. of Colorado
Colorado State
U. of Florida
U. of Georgia
U. of Manoa/Hawaii
U. of Illinois-Urbana
Purdue
Michigan State
U. of Michigan
U. of Minnesota
U. of Missouri-Columbia
Ohio State
Oregon State
Penn State
U. of Pittsburgh
Texas A & M
U. of Texas-Austin
U. of Washington
U. of Wisconsin-Madison

Doctoral Granting I

U. of Alabama
Arizona State
UC - Riverside
UC - Santa Barbara
UC - Santa Cruz
U. of Delaware
Georgia State
S. Illinois Univ.-Carb.
Ball State-Indiana
U. of Louisville
U. of S. Mississippi
U. New Hampshire
SUNY-Albany
SUNY-Binghamton
Kent State
Ohio University

Research II

Auburn
U. of California-Irvine
U. of Connecticut
Florida State
Iowa State
Kansas State University
U. of Kansas
U. Massachusetts/Amherst
U. of Nebraska
U. of New Mexico
SUNY-Buffalo
SUNY-Stony Brook
U. of Cincinatti Ohio
Oklahoma State
U. of Oregon
Temple
U. of Tennessee-Knox
Utah State
U. of Vermont
U. of Virginia
Virginia Poly Tech
WSU

Doctoral Granting I (cont.)

U. of Toledo
U. of Rhode Island
Clemson
N. Texas State Univ.
U. of Houston
U of Wisconsin-Mill.

Doctoral Granting II

Indiana State
U. of North Carolina
Bowling Green
Miami - Univ. of Ohio
U. of Akron
U. of South Dakota
Memphis State
East Texas State

APPENDIX D

SUMMARY OF DATA COLLECTION RESOURCES

Data Collection Resources

Variables	Source(s)	Year of Data	Total Number
Dependent Variables: Total Gift Income · Alumni $ · Non-Alumni $ · Corporate/Business $ · Foundation $ · Other $	Council for Financial Aid to Education (CFAE)	1982-83 1983-84 1984-85	77
Full-Time Equivalent F.T.E.	National Center for Education Statistics Report	1986	77
Number of Alumni	* CFAE	1984-85	77
Federal Reserve Grants	National Science Foundation Report	1985	77
State Legislative Appropriations	M.M. Chambers Report Chronicle of Higher Education	1984	77
Student Financial Aid (U.S.)	Department of Education Office of Student Financial Aid	1986	77
Age of Institution	Peterson's Annual Guide	1987 (reporting 1984 data)	77
Endowment Market Value	* CFAE	1984-85	77
In-State Enrollment	Peterson's Guide	1987 (1985 data)	77
Total Student Enrollment	Peterson's Guide	1987 (1985 data)	77
Cost of Attendence	College Cost Handbook	1986 (for 1985)	77
Number of Graduate Students	Peterson's Guide	1987 (1985 data)	77
Number of Advancement Professionals	Case Membership Directory	1986	77
Educational and General Fund (E&G)	National Center for Education Statistics Report	1986	77

* For this source, data might have been collected by a personal telephone call to the institution.

APPENDIX E

INSTITUTIONAL FUND RAISING QUESTIONNAIRE

SURVEY
INSTITUTIONAL FUND RAISING COMPONENTS

A. Institution: ____

Individual Completing the Questionnaire

B. Name: ____________________ C. Title: ____________________

D. Telephone Number: (   ) ____________

Directions: Please read each question. To answer most questions select the answer and write the number preceding your answer in the space in front of the question. Otherwise respond as indicated.

Institutional Characteristics

___ 1. How would you best describe your geographical location? (Select one)

(1) Rural
(2) Urban
(3) Suburban

___ 2. How would you best describe your institution's academic reputation? (Select one)

(1) Excellent
(2) Above average
(3) Average
(4) Below average

3. How would you best describe your institution's academic strengths? (Check [ ] all that apply)

___ (1) Over-all strong research
___ (2) Selective research strengths
___ (3) Strong undergraduate teaching
___ (4) Strong undergraduate and graduate teaching
___ (5) Strong public service

4. Which 3 academic programs at your institution do you feel distinguish your institution from others within your state. (Write in the names of the three you consider have excellent academic reputations, distinguishing your institution from others within the state?)

(1) ____________________
(2) ____________________
(3) ____________________

(Over)

___ 5. Over the past three years, how would you describe the winning records of your major athletic team sports? (Select one)

(1) Excellent
(2) Above average
(3) Average
(4) Below average

___ 6. How would you characterize your institution's commitment to fund raising? (Select one)

(1) Extremely Committed
(2) Very Committed
(3) Average Commitment
(4) Needs Greater Commitment

7. Which of the following 3 reasons for contributing (of most importance), do you feel are reasons why people give to your institution? (Please check [ ] three)

___ (1) Tax benefits
___ (2) Excellent Case Statements
___ (3) Gift Club Membership
___ (4) People visit the campus frequently & see the need
___ (5) Feeling of Obligation
___ (6) Strong donor recognition program
___ (7) Out of loyalty
___ (8) The right person(s) have asked them
___ (9) Altruistic feelings about the University.

___ 8. How many active alumni chapters do you have? (Select one)

(1) less than 5
(2) 6 - 10
(3) 11 - 15
(4) 16 - 20
(5) 21 - 25
(6) 26 - 30
(7) 31 - 35
(8) over 35

Fund Raising Characteristics (Programs/Policies)

___ 1. How many years has your institution been involved in organized fund raising? (Select one)

(1) 0 - 5 years
(2) 6 - 9 years
(3) 10 - 13 years
(4) 14 - 17 years
(5) 18 - 22 years
(6) 23 - 27 years
(7) 28 - 32 years
(8) 33 - 37 years
(9) 38 - 41 years
(10) 42+ years

___ 2. How would you characterize your organizational structure for fund raising? (Select one)

(1) Centralized
(2) Decentralized
(3) Combination (Centralized and Decentralized)

___ 3. What is the full-time equivalent number of professional fund raisers you employ in your fund raising/development areas? (Select one)

(1) 0 - 2
(2) 3 - 5
(3) 6 - 8
(4) 9 - 11
(5) 12 - 14
(6) 15 - 17
(7) 18 - 20
(8) 21 - 23
(9) 23 - 25
(10) 25+

___ 4. What is the number of support staff members employed in your fund raising/development area? (Select one)

(1) 0 - 2
(2) 3 - 5
(3) 6 - 8
(4) 9 - 11
(5) 12 - 14
(6) 15 - 17
(7) 18 - 20
(8) 21 - 23
(9) 23 - 25
(10) 25+

___ 5. How many years has your Chief Development Officer been employed as a development officer at your institution? (Select one)

(1) 0 - 1 years
(2) 2 - 3 years
(3) 3 - 4 years
(4) 4 - 5 years
(5) 5 - 6 years
(6) 7+ years

___ 6. Please identify the approximate length - average term of service - of your professional staff members. (Select one)

(1) 0 - 2 years
(2) 3 - 5 years
(3) 6 - 8 years
(4) 9+

___ 7. Have you contracted professional fund raising counsel within the last five years? (Select one)

(1) Yes
(2) No

___ 8. Is there an institutional process in place to identify institutional priorities (needs) which are marketed to gift income donors? (Select one)

(1) Yes
(2) No

(Over)

___ 9. Are specific dollar goals set each year for your gift income fund raising goals? (Select one)

(1) Yes (2) No

___ 10. Please identify the 1984/85 total fund raising budget at your institution including all salary, benefits, and direct operational costs. (Select one)

Budget

(1) less than $99,999
(2) $100,000 - $499,999
(3) $500,000 - $999,999
(4) $1 million - $2 million
(5) $2 million - $3 million

Budget

(6) $3 million - $4 million
(7) $4 million - $5 million
(8) $5 million - $6 million
(9) over $6 million

11. Please check each or all of the functions related to your development (fund raising) efforts which are included in your budget. (Place a check ( ) before each which apply.)

Gift Income Programs

___ (1) Annual Gifts
___ (2) Major Gifts
___ (3) Deferred Gifts
___ (4) Corporate Gifts
___ (5) Foundation Gifts
___ (6) Capital Campaigns

12. For every dollar expended in your fund raising efforts, how many gift income dollars do you receive? (Please indicate the ratio of dollars spent to dollars received.)

___________ : 1

___ 13. How would you rate your institution's communication through alumni news publications, newsletters, media programs and special mailings, and its effectiveness with fund raising? (Select one)

(1) Excellent
(2) Above Average
(3) Average
(4) Needs Improvement
(5) Don't Know

14. Given the following four personal solicitation techniques, indicate the frequency of use for each of the fund raising programs listed. (Opposite each technique place a check [ ] which describes its use.)

Solicitation Technique	(1) Always Used	(2) Frequently Used	(3) Moderately Used	(4) Never Used
(1) Direct Mail	___	___	___	___
(2) Telephone	___	___	___	___
(3) Written Proposals	___	___	___	___
(4) Personal Solicit.	___	___	___	___

15. How involved are each of the following as gift fund solicitors? (Opposite each type of solicitator place a check [ ] to describe the kind of involvement.)

Type of Solicitation	(1) Very Involved	(2) Moderately Involved	(3) Minimally Involved	(4) Not Involved
(1) Volunteers	___	___	___	___
(2) President	___	___	___	___
(3) Academic Officers	___	___	___	___
(4) Trustees (Fdn. Leadership)	___	___	___	___
(5) Faculty	___	___	___	___
(6) Students	___	___	___	___
(7) Professional & Staff	___	___	___	___

___ 16. Has your institution been involved in either a major capital or comprehensive fund raising campaign within the past three years? (Select one)

(1) Yes (2) No (3) In progress (4) Not Applicable

___ 17. If your answer to item 16 was yes, did you meet your fund raising campaign goal? (Select one)

(1) Yes (2) No

___ 18. How would you best describe the alumni/donor data base at your institution for major donor research. (Select one)

(1) Very Effective
(2) Moderately Effective
(3) Effective for our Needs
(4) Not Effective

(Over)

___ 19. Do you have a centralized computer research and gift processing unit? (Select one)

(1) Yes (2) No

20. For the next three years, how much program emphasis do you plan to place on each of the following? (Opposite each item related to fund raising place a check [ ] to describe the emphasis you plan to place.)

Programs for Gift Income	(1) Heavy Emphasis	(2) Moderate Emphasis	(3) Minimal Emphasis	(4) No Emphasis
(1) Annual Giving	___	___	___	___
(2) Major Giving	___	___	___	___
(3) Deferred Giving	___	___	___	___
(4) Corporate Giving	___	___	___	___
(5) Foundation Giving	___	___	___	___

___ 21. Please indicate the percentage increase you hope to achieve in your fund raising efforts in 1989 compared to 1987. (Select one)

(1) less than 5%
(2) 5 - 7%
(3) 8 - 10%
(4) 11 - 12%
(5) 13 - 15%
(6) 16 - 18%
(7) 19 - 21%
(8) 22%

22. Please take a moment to briefly describe or list the most important improvement that would make your program better five years from now - better than it is today. (For example: increased budget, more staff, a new president, etc.)

____

____

____

____

Thank You!

APPENDIX F

COVER LETTER

Janet L. Woods
Director of Development
Todd Hall 244E
Washington State University
Pullman, WA 99164-4720
March 2, 1987

Rich Matheny
555 Administration
University of California, Irvine
Irvine, California 92717

Dear Rich:

Do we really know what institutional characteristics are associated with our gift income levels? And, do we know what fund raising program practices the successful institutions use to acquire private gift income?

Questions about factors associated with gift income are to be explored in a study I am undertaking with all public research and doctoral granting institutions.

In this study, a special gift income index has been identified to more closely equate all institutions relative to their size and gift income levels. This study will not only identify those institutional and programmatic factors which are most closely associated with gift income, but it will also identify those factors which predict potential gift income levels.

To complete this study, I need your cooperation and involvement. The enclosed questionnaire is brief, and the data I obtain will be CONFIDENTIAL and will appear in summary form.

For your participation, I will send you an abstract of the completed study. Please return the questionnaire in the enclosed business reply envelope and mail it as soon as possible.

I hope you will join me in this effort to analyze fund raising efforts and gift income levels.

Thanks for your cooperation.

Sincerely,

Janet L. Woods
Director of Development

P.S. Please try to return the questionnaire by Monday, February 16. Thanks!

APPENDIX G

VARIABLES AND UNITS OF MEASURE

Variables and Units of Measure

Variables	Units of Measurement
Financial	
1. Number of Alumni	Unit
2. Federal Research & Development	Dollars (Thousands)
3. State Legislative Appropriations	Dollars (Millions)
4. Student Financial Aid	Dollars (Millions)
Inherent Institutional	
1. Age	Years
2. Endowment Market Value	Dollars (Millions)
3. In-State Enrollment	Units
4. Total Student Enrollment	Units
5. Cost of Attendance	Dollars (Thousands)
6. Graduate Student Attendance	Units
7. Number of Advancement Professionals	Units
8. Educational & General Expenditures (E&G)	Dollars (Millions)

APPENDIX H

STRENGTH OF RELATIONSHIP GUIDELINE

Strength of Relationship Guideline

This recommended guideline was identified by J. P. Guilford (1950).

Less than .20....Slight; almost negligible relationship

.20 - .40....Low correlation; definite, but small relationship

.40 - .70....Moderate correlation; substantial relationship

.70 - .90....High correlation; marked relationship

.90 - 1.00....Very high correlation; very dependable relationship

APPENDIX I

GENERALIZED REGRESSION EQUATION

Generalized Regression Equation

$$y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 \cdots$$

Dependent Variable	a = the constant
(Gift Income)	b_1 is the change in y for every unit change in x_1, given all the independent variables are held constant.

(Refer to Appendix G for variables and unit measures.)

APPENDIX J

A REGRESSION EQUATION COMPUTATION FOR AUBURN UNIVERSITY

A Regression Equation Computation for Auburn University

The following is an example of the steps taken to hand calculate the regression equation to predict the total gift income index of Auburn University (RII) if you know one variable such as endowment market value.

The following processes and steps are used:

$$Y = a + b_1X_1 + e$$

$$E(Y) = a + b_1X_1 \qquad \text{because } E(e) = 0$$

If you want to predict the expected value of Y_{mean} for a particular value of X_1, identify $X_{(new\ variable)}$ then

$\hat{Y}_{new}$ = expected value of Y_{mean} for X_{new}

$= a + b_1X_{new}$

To obtain a confidence interval for this estimate for example, $\hat{Y}_{new}$, we need to consider the standard error of the estimate (STD.E.E).

C.I. = Confidence Interval

C.I. for $\hat{Y}_{new}$ if given by,

$$\hat{Y}_{new} \pm t_{n-2,\alpha} S_{\hat{Y}_{new}}$$

n = sample size

$t_{n-1,\alpha}$ = value from the t-table with 'n-2' degrees of freedom and a significance level of α.

e.g. if n = 22, n-2 = 20 and if we work with a 5% significance level, i.e., $\alpha = 0.05$,

$$t_{n-2,\frac{\alpha}{2}} = 2.086$$

Now, if we wanted to predict the total gift income index (TGI) for Auburn University (RII) with an endowment market value (EMV) of $\$46,164,934 = \$46.164934 \times 10^{+6}$

The regression equation for RII schools is:

$$\overset{4.63827 \times 10^{-6}}{}$$

$$\begin{aligned} TGI &= 0.00000463827\ EMV + 420.34268 \\ &= 4.63827 \times 10^{-6} \times 46.164934 \times 10^{+6} + 420.34268 \end{aligned}$$

Therefore $TGI_{predicted} = 634.468$

The standard error of estimate is given by

$$t_{n-2,\alpha} \times S_{\hat{Y}_{predicted}}$$

$$S^2_{\hat{Y}_{Predicted}} = \sigma^2_e \left[\frac{1}{n} + \frac{(X_{new} - \hat{X})^2}{\sum_{i=1}^{22} (X_i - \hat{X})^2} \right]$$

Where σ^2_e = Error variance, Mean Square error

n = Sample size

X_{new} = new variable

$X^{\cdot}$ = Sample mean value for EMV

$\Sigma(X_i - X)^2$ = Corrected Sum of Squares for EMV

$$\begin{aligned} S^2_{\hat{Y}_{predicted}} &= 50200.94579 \times \left[\frac{1}{22} + \frac{(46.164934 \times 10^6 - 53.946515 \times 10^6)^2}{8.21109769 \times 10^{16}} \right] \\ &= 50200.94579 \times \left[\frac{1}{22} + \frac{10^{12} \times (7.781581)^2}{8.21109769 \times 10^{16}} \right] \\ &= 50200.94579 \times \left[\frac{1}{22} + \frac{10^{12} \times 60.553}{8.21109769 \times 10^{16}} \right] \\ &= 50200.94579 \times \left[\frac{1}{22} + \frac{7.33453}{10^4} \right] \\ &= 50200.94579 \times [0.0454545454 + 0.000737453] \\ &= 50200.94579 \times [0.046192] \\ &= 2318.882020 \end{aligned}$$

$s^2_{Y_{\text{predicted}}} = 48.15477$

Therefore, the confidence interval for TGI for Auburn is

$634.468 \pm 2.086 \times 48.15477$

634.468 ± 100.4508502

$(534.01714\ ,\ 734.91885)$

Lower 95% C.I. limit	Higher 95% C.I. limit

APPENDIX K

COMPUTER PRINT OUT OF REGRESSION EQUATION RESULTS FOR AUBURN UNIVERSITY

```
                                              SAS                                  18:13 SATURDAY, MARCH 21, 1987

DEP VARIABLE: TOTALGI
                                          ANALYSIS OF VARIANCE

                           SOURCE      DF        SUM OF           MEAN        F VALUE       PROB>F
                                                SQUARES          SQUARE

                           MODEL        1     1766500.84      1766500.84       35.189       0.0001
                           ERROR       20     1004018.92     50200.94579
                           C TOTAL     21     2770519.76

                              ROOT MSE        224.0557       R-SQUARE          0.6376
                              DEP MEAN        670.5613       ADJ R-SQ          0.6195
                              C.V.            33.41315

                                          PARAMETER ESTIMATES

                                     PARAMETER          STANDARD        T FOR H0:
                      VARIABLE  DF    ESTIMATE             ERROR      PARAMETER=0      PROB > |T|

                      INTERCEP   1       420.34268     63.72686440            6.596          0.0001
                      EMV        1  .00000463827       7.81907E-07            5.932          0.0001


                                    PREDICT      STD ERR     LOWER95%     UPPER95%     LOWER95%     UPPER95%
            OBS *        ACTUAL       VALUE      PREDICT         MEAN         MEAN      PREDICT      PREDICT     RESIDUAL

      Auburn   1          957.8       634.5      48.1548        534.0        734.9        156.4       1112.5        323.3
               2          938.9       431.3      62.5240        300.8        561.7     -53.9652        916.5        507.6
               3          493.7       445.9      60.9570        318.8        573.1     -38.4209        930.3      47.8134
               4          439.9       460.0      59.5101        335.9        584.2     -23.5425        943.6     -20.0895
  Other        5          581.9       499.0      55.8422        382.5        615.5      17.3297        980.7      82.9179
               6          558.3       672.8      47.7703        573.1        772.4        194.9       1150.7       -114.5
               7          760.0      1145.9      93.2935        951.3       1340.5        639.7       1652.2       -385.9
  Research II  8          340.9       439.3      61.6628        310.6        567.9     -45.4890        924.0     -98.3201
               9          962.1       943.5      66.3245        805.2       1081.9        456.1       1430.9      18.6240
              10          383.1       552.8      51.7319        444.9        660.7      73.1019       1032.4       -169.7
  Institutions 11         621.1       810.6      53.2864        699.5        921.8        330.2       1291.0       -189.5
              12          215.5       430.6      62.5928        300.1        561.2     -54.6363        915.9       -215.2
              13          670.7       888.6      60.2741        762.9       1014.3        404.6       1372.6       -217.9
              14          565.9       429.5      62.7158        298.7        560.3     -55.8335        914.8        136.4
              15          510.3       528.7      53.4210        417.3        640.1      48.2260       1009.2     -18.4109
              16          468.4       549.4      51.9505        441.1        657.8      69.6611       1029.2     -81.0372
              17          727.1       641.4      48.0210        541.2        741.6        163.4       1119.4      85.6978
              18          331.6       454.1      60.1085        328.7        579.5     -29.7639        938.0       -122.6
              19          723.0       631.8      48.2126        531.3        732.4        153.8       1109.9      91.1556
              20         2013.8      1607.7        165.1       1263.5       1952.0       1027.3       2188.2        406.1
              21          787.5       622.6      48.4470        521.6        723.7        144.5       1100.8        164.9
              22          700.9       932.2      65.0115        796.5       1067.8        445.5       1418.8       -231.3

SUM OF RESIDUALS                  8.12861E-12
SUM OF SQUARED RESIDUALS              1004019
PREDICTED RESID SS (PRESS)            1801313

          * Institutions
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                        SAS                          18:13 SATURDAY, MARCH 21, 1987

VARIABLE           N    UNCORRECTED      CORRECTED        MEAN
                            SS               SS

EMV               22 1.46135961E+17 8.21109769E+16  53946515.7727
```

APPENDIX L

CORRELATION COEFFICIENTS FOR ALL GIFT INCOME SOURCES

CORRELATION COEFFICIENTS WITH ALL GIFT INCOME SOURCES

CLASSIFICATION	NUMBER	GIFT SOURCES				
		ALUMNI	NON-ALUMNI	CORP.	FOUND.	OTHER
All 77 Institutions	77	.6434	.7452	.9190	.8407	.7164
p		.000	.000	.000	.000	.000
TYPE						
RI	25	.4915	.5808	.9000	.7015	.5508
p		.006	.001	.000	.000	.002
RII	22	.6589	.6815	.5968	.4982	.2897
p		.000	.000	.002	.009	.096
DGI	22	.4523	.6612	.9063	.9074	.5767
p		.017	.000	.000	.000	.002
DGII	8	.8333	.8095	.9286	.6667	.1429
p		.005	.007	.000	.035	.368
REGION						
East	25	.7577	.5931	.8954	.8277	.6092
p		.000	.001	.000	.000	.001
Midwest	17	.5466	.7353	.9118	.9020	.8039
p		.012	.000	.000	.000	.000
Southeast	10	.6970	.5394	.9030	.6121	.7939
p		.013	.054	.000	.030	.003
Southwest	9	.6500	.7667	.9333	.8833	.8500
p		.029	.008	.000	.001	.002
West	16	.5382	.7265	.8618	.8441	.6029
p		.016	.001	.000	.000	.007
Top	20	.4677	.1759	.7684	.4376	.2165
p		.019	.229	.000	.027	.180
Bottom	20	.3729	.6887	.7173	.7128	.4453
p		.053	.000	.000	.000	.025

APPENDIX M

CORRELATION COEFFICIENTS FOR ALL INSTITUTIONAL VARIABLES

CORRELATION COEFFICIENTS FOR ALL INSTITUTIONAL VARIABLES

CLASSIFI-CATION	NO.	FINANCIAL # OF ALUMS	FED. R+D	LEG. APP.	STUD. FINAID	INHERENT AGE	ENDOW	IN-STATE	TOTAL ENROL.	COST	NO. GRADS	NO. ADV.	E+G
All 77 Inst. p	77	.6098 .000	.7138 .000	.5514 .000	.3173 .000	.3431 .000	.7244 .000	.3949 .000	.4606 .000	.2553 .013	.4620 .000	.4972 .000	.7481 .000
CLASS RI p	25	.2831 .085	.4585 .011	.5131 .004	.0915 .332	.2286 .136	.3231 .058	.2877 .082	.2092 .158	.0500 .406	.4300 .016	.2639 .101	.3392 .049
RII p	22	.2411 .140	-.1022 .325	.0469 .418	-.2953 .091	.3617 .049	.6296 .001	-.1925 .195	-.0623 .381	.0040 .493	-.0830 .357	.0845 .345	.4015 .032
DGI p	22	.0728 .374	.2558 .125	.2558 .125	.1880 .201	.1875 .202	.7696 .000	-.1711 .223	-.1248 .290	.1717 .222	-.0859 .352	.4397 .020	.4918 .010
DGII p	8	.1667 .347	-.1078 .400	-.3095 .228	-.0952 .411	.2857 .246	.7381 .018	-.0476 .455	-.0476 .455	-.0476 .455	-.3810 .176	.3353 .208	.1667 .347
REGION East p	25	.6185 .000	.6946 .000	.4269 .017	.4554 .011	.5596 .002	.8146 .000	.4008 .024	.4946 .006	.6700 .000	.4770 .008	.5820 .001	.6831 .000
Midwest p	17	.8995 .000	.5588 .010	.5592 .010	.3407 .090	.4920 .022	.8431 .000	.5123 .018	.5074 .019	.4071 .052	.5147 .017	.4816 .025	.7941 .000
Southeast p	10	.5758 .041	.8788 .000	.7576 .006	.2000 .290	.5758 .041	.8424 .001	.2364 .255	.3091 .192	.8909 .000	.2970 .202	.5706 .042	.5714 .042
Southwest p	9	.6333 .034	.6667 .025	.9333 .000	.1167 .000	.4811 .095	.8000 .005	.7500 .010	.7333 .012	.3167 .203	.6167 .038	.5500 .062	.8667 .001
West p	16	.5235 .019	.7912 .000	.3324 .104	.5324 .017	.1075 .346	.4029 .061	.4765 .031	.5059 .023	.2500 .175	.6559 .003	.4867 .028	.7235 .001
Top p	20	.3113 .091	.5308 .008	.4556 .022	.1825 .216	.4868 .015	.5820 .004	.3714 .053	.3654 .057	.2144 .182	.5233 .009	.2577 .136	.4571 .021
Bottom p	20	.2120 .185	.2520 .142	-.0541 .410	.4962 .013	.0899 .355	.6842 .000	-.0346 .442	.0165 .472	.4190 .033	-.2618 .132	.3051 .095	.2887 .108

APPENDIX N

RESULTS FOR ALL MULTIPLE REGRESSION EQUATIONS

STUDY RESULTS FOR
ALL MULTIPLE REGRESSION EQUATIONS

CLASSIFICATION	NO.	VARIABLES	STANDARD ERROR OF ESTIMATE	R^2	R	FORECAST EFFICIENCY
Financial Variables	77	FED R+D/LEGIS. APP.	$328.0393	.4818 (48.2%)	.69	30.00%
Inherent	77	EDUC. + G. EXP./Endowment	$324.6562	.5206 (52%)	.72	30.77%
All Variables	77	FED R+D/Endowment	$308.8129	.5662 (56.6%)	.75	34.14%
Without FED R+D	77	EDUC. + G. EXP/ Endowment	$324.6562	.5206 (52%)	.72	30.76%
RI	25	LEG. APP./FED R+D	$355.9748	.3911 (39.1%)	.63	21.97%
RII	22	Endowment Market Value	$244.0557	.6276 (62.8%)	.80	39.18%
DGI	22	ENDOW/EDUC. + G. EXP.	$155.9613	.6049 (60.1%)	.78	37.15%
DGII	8	Endowment Market Value	$96.2304	.5312 (53.1%)	.73	31.54%
East	25	FED R+D/AGE	$181.7855	.7091 (70.9%)	.84	46.07%
Midwest	17	Alumni	$212.2162	.8224 (82.2%)	.91	57.86%
Southeast	10	FED R+D/Endowment	$220.4045	.9029 (90.3%)	.95	68.84%
Southwest	9	Legislative Appropriations	$172.3699	.8775 (87.8%)	.94	65.00%
West	16	Federal Research & Dev.	$226.4894	.7590 (75.9%)	.84	50.91%
Top	20	Endowment Market Value	$282.3883	.3153 (31.5%)	.56	17.25%
Bottom	20	Endowment Market Value	$66.3423	.4014 (40.1%)	.64	22.64%